# DOCUMENT RESUME

ED 219 550 CE 033 245

| | |
|---|---|
| AUTHOR | Aiken, Carol |
| TITLE | A Guide to Educational Programs in Noncollegiate Organizations. 1982 Edition. |
| INSTITUTION | New York State Education Dept., Albany. Cultural Education Center. |
| SPONS AGENCY | Carnegie Corp. of New York, N.Y.; New York State Dept. of Labor, Albany. |
| PUB DATE | 82 |
| NOTE | 460p. |
| EDRS PRICE | MF01/PC19 Plus Postage. |
| DESCRIPTORS | *College Credits; *Course Content; *Course Descriptions; *Credit Courses; Experiential Learning; Guidelines; Higher Education; *Nonschool Educational Programs; Postsecondary Education; *Prior Learning |
| IDENTIFIERS | Comprehensive Employment and Training Act; Program on Noncollegiate Sponsored Instruction |

ABSTRACT

This guide is intended for use by counselors, providing them with credit recommendations and course descriptions to assist the process of granting credit to students for learning acquired in noncollegiate activity. The guide is divided into two sections. Section 1 contains course exhibits for courses which have been reviewed and recommended for credit since the Program on Noncollegiate Sponsored Instruction began in 1974. Section 2 contains exhibits for courses conducted by organizations under the Comprehensive Employment and Training Act (CETA) and recommended for credit. Each course in the guide is listed in the course index alphabetically by title under the name of the organization--almost all located in New York--that offers it. Each course exhibit provides the following information: title, course number, location, length, dates, objective, instruction (topics covered, teaching methods and materials used), and credit recommendations. The guide also contains background information on the program, information for students and administrators, and suggestions for use. (KC)

***********************************************************************
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
***********************************************************************

ED219550

# A GUIDE TO EDUCATIONAL PROGRAMS IN NONCOLLEGIATE ORGANIZATIONS

The University of the State of New York does not discriminate on the basis of age, color, creed, disability, marital status, veteran status, national origin, race, or sex in the educational programs and activities which it operates. This policy is in compliance with Title IX of the Education Amendments of 1972.

Inquiries concerning this policy may be referred to the University's Affirmative Action Officer, Education Building, Albany, NY 12234.

CE 033 245

The University of the State of New York
Program on Noncollegiate Sponsored Instruction
Cultural Education Center
Empire State Plaza
Albany, New York 12230
Telephone: (518) 434-0118

1982 Edition

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

● Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R. Trombly

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

## THE UNIVERSITY OF THE STATE OF NEW YORK

**Regents of The University** *(with years when terms expire)*

| | | |
|---|---|---|
| 1988 | WILLARD A. GENRICH, *Chancellor*, LL.B., L.H.D., LL.D., Litt.D., D.C.S., D.C.L. | Buffalo |
| 1988 | J. EDWARD MEYER, *Vice Chancellor*, B.A., LL.B. | Chappaqua |
| 1986 | KENNETH B. CLARK, A.B., M.S., Ph.D., LL.D., L.H.D., D.Sc. | Hastings on Hudson |
| 1983 | HAROLD E. NEWCOMB, B.A., LL.D. | Owego |
| 1982 | EMLYN I. GRIFFITH, A.B., J.D. | Rome |
| 1983 | MARY ALICE KENDALL, B.S. | Rochester |
| 1984 | JORGE L. BATISTA, B.A., J.D., LL.D. | Bronx |
| 1986 | LAURA BRADLEY CHODOS, B.A., M.A. | Vischer Ferry |
| 1987 | MARTIN C. BARELL, B.A., I.A., LL.B. | Kings Point |
| 1984 | LOUISE P. MATTEONI, B.A., M.A., Ph.D. | Bayside |
| 1987 | R. CARLOS CARBALLADA, B.S., L.H.D. | Rochester |
| 1988 | FLOYD S. LINTON, A.B., M.A., M.P.A., D.C.L. | Miller Place |
| 1988 | SALVATORE J. SCLAFANI, B.S., M.D. | Staten Island |
| 1982 | MIMI LIEBER, B.A., M.A. | New York |
| 1985 | SHIRLEY C. BROWN, B.A., M.A., Ph.D. | Albany |

**President of The University and Commissioner of Education**
GORDON M. AMBACH

**Executive Deputy Commissioner of Education**
ROBERT J. MAURER

**Deputy Commissioner for Higher and Professional Education**
DONALD J. NOLAN

**Assistant Commissioner for Higher Education Academic Review**

**Director of Program on Noncollegiate Sponsored Instruction**
KEVIN P. REILLY

# FOREWORD

Millions of American adults currently participate in formal learning activities sponsored by noncollegiate organizations. The corporate sector is spending billions of dollars a year to provide postsecondary education and training. Four out of five of the country's largest companies—those with 500 or more employees—offer their workers opportunities for formal education.

Until the New York Board of Regents initiated the Program on Noncollegiate Sponsored Instruction in 1974, there was no systematic way to relate educational programs conducted by noncollegiate organizations to the country's traditional higher education system. As a result, individuals who had successfully completed these programs usually were unable to achieve academic recognition for the knowledge and competencies gained. This situation led to unnecessary duplication of educational costs and services.

The 1982 edition of *A Guide to Educational Programs in Noncollegiate Organizations* continues the work of the Regents Program on Noncollegiate Sponsored Instruction in providing guidance to educational institutions in awarding credit for courses conducted by noncollegiate organizations. The *Guide* is designed for use not only in New York State but throughout the country. It contains descriptions and credit recommendations for some 1,565 courses in a wide variety of subject areas offered by 150 organizations, which include business and industry, government agencies, labor unions, professional and voluntary associations, hospitals, and other organizations whose primary purpose is not education. All course exhibits published in earlier editions of the *Guide* are included in the 1982 edition, along with exhibits for 280 courses evaluated since April 1980.

The reasons for the New York Regents' establishment of the national Program on Noncollegiate Sponsored Instruction are as valid now as they were in 1974. The Regents' long-standing commitment to a higher education system that provides increased access and more options to students of all ages has not diminished. Many of the educational activities conducted by U. S. companies and other noncollegiate organizations in New York, and in other states where the Program has worked, reach a nationwide audience. Colleges and universities around the country continue to seek ways to assess learning acquired by students and potential students in noncollegiate settings. As training and retraining to keep job skills current become more vital, the Program's effort to link schools with education provided at the workplace and elsewhere will become even more necessary.

The Program will continue to follow a thorough and objective evaluation process as additional courses are reviewed. Educational institutions can be confident that the Program's credit recommendations provide reliable academic standards on which to base credit awards for courses sponsored by noncollegiate organizations. Academic recognition of these courses is motivating more persons to enroll as full- or part-time students in degree programs and is fostering increased cooperation between these sectors of our educational system.

GORDON M. AMBACH

*President of The University*
*of the State of New York and*
*Commissioner of Education*

March 1982

# ACKNOWLEDGMENTS

The University of the State of New York wishes to express appreciation to the many organizations and individuals who have contributed to the Program on Noncollegiate Sponsored Instruction and to this 1982 *Guide to Educational Programs in Noncollegiate Organizations*.

A number of organizations mentioned on this page in previous editions of the *Guide* deserve mention again. Special acknowledgment is given to the Carnegie Corporation of New York which has generously provided most of the funding for Program activities over the past eight years. A contract from the National Institute of Education enabled the Program to conduct a follow-up study in 1976-77 to determine its initial impact in New York State. The New York State Department of Labor has provided three contracts to make it possible for the Program to serve persons who complete training programs conducted under the Comprehensive Employment and Training Act (CETA) and the Youth Employment and Demonstration Projects Act (YEDPA). We are also grateful to the Fund for the Improvement of Postsecondary Education of the U. S. Education Department for its grant to enable the Program to expand its follow-up services to participating noncollegiate organizations and to develop effective models of educational advisement in work-related settings. We continue to be pleased to join with these organizations in increasing educational options for students of every age.

Since the publication of the last edition of the *Guide*, the Program has received grants from two corporations whose courses it has recommended for credit—the New York Telephone Company and Texaco, Inc. We would like to thank these corporations for their support of the Program's work.

Individuals who have lent their time and skills to insure the continued success of the Program should also be given special recognition: Janet Beck, Coordinator of Continuing Education, State University College at Brockport; William Berliner, Professor of Management, College of Business and Public Administration, New York University; Frank Clemente, President, Total Systems Education; Myron Goldberg, Chairman, Computer and Information Systems, Pace University; Daryl Hall, Staff Supervisor, New York Telephone Company; John Nagi, Vice President for Student Affairs, Hudson Valley Community College; Geraldine Ruiz, Chairperson, Radiologic Technology, Hostos Community College; Inspector Frederick Thumhart, New York State Division of State Police; George Walker, Manager, Human Resources Development, Texaco, Inc.; and William Welty, Professor of Management, Lubin Graduate School of Business, Pace University. In addition, we are grateful for the support and cooperation of the administrators and faculties of the colleges and universities in New York State, the Connecticut Board for State Academic Awards, and the many offices within the New York State Education Department that have provided assistance.

Once again we are particularly indebted to the subject matter specialists who have served as evaluators for the Program. (See Appendix A.) The reliability of the credit recommendations listed in the *Guide* is the result of their thorough, objective, and thoughtful reviews of noncollegiate sponsored courses and programs.

Finally, we acknowledge the work of Carol Aiken of the Program staff who was responsible for the preparation and editing of the *Guide*.

This publication was made possible by grants from the Carnegie Corporation of New York and the New York State Department of Labor. The statements made and the views expressed are solely the responsibility of the publisher and do not necessarily reflect the opinions of the Carnegie Corporation or the State Department of Labor.

# CONTENTS

Foreword . . . . . . . . . . iii

Acknowledgments . . . . . . . . . . iv

Introduction

- Background . . . . . . . . . . 1
  - History of the Program
  - Follow-up Studies
- The Review Process . . . . . . . . . . 3
- Questions and Answers for Students . . . . . . . . . . 4
- Questions and Answers for Administrators and Faculty . . . . . . . . . . 6
- How to Use the Guide . . . . . . . . . . 7
  - Format of the Guide
  - How to Locate a Course Exhibit
  - How to Read a Course Exhibit
  - Verifying Student Records
  - Awarding Credit Based on the Recommendations
  - Duplication of Credit
  - Assistance From Program Staff

Section I—Course Descriptions and Credit Recommendations . . . . . . . . . . 11
- Agway Inc. . . . . . . . . . . 13
- American Bankers Association—Stonier Graduate School of Banking . . . . . . . . . . 15
- American Institute for Creative Living . . . . . . . . . . 17
- American Institute of Banking—Albany Chapter . . . . . . . . . . 20
- American Institute of Banking—Buffalo Chapter . . . . . . . . . . 24
- American Institute of Banking—Nassau County Chapter . . . . . . . . . . 32
- American Institute of Banking—New York City Chapter . . . . . . . . . . 36
- American Institute of Banking—Rochester Chapter . . . . . . . . . . 47
- American Institute of Banking—Westchester County Chapter . . . . . . . . . . 51
- American Jewish Committee . . . . . . . . . . 56
- American Legion Department of New York . . . . . . . . . . 58
- American Telephone and Telegraph Company . . . . . . . . . . 59
- American Telephone and Telegraph Company-Long Lines . . . . . . . . . . 63
- AMF, Incorporated . . . . . . . . . . 70
- Arnot-Ogden Memorial Hospital . . . . . . . . . . 71
- Arthur Andersen & Co. . . . . . . . . . . 75
- Bernard Fineson Developmental Center . . . . . . . . . . 76
- Biological Photographic Association, Inc. . . . . . . . . . . 80
- Blue Cross and Blue Shield of Greater New York . . . . . . . . . . 81
- Booth Memorial Medical Center . . . . . . . . . . 83
- Broome Developmental Services . . . . . . . . . . 84
- Center for Human Services Training, Inc. . . . . . . . . . . 85
- Central Islip Psychiatric Center . . . . . . . . . . 86
- Central Labor Rehabilitation Council of New York, Inc. . . . . . . . . . . 87
- Charles S. Wilson Memorial Hospital . . . . . . . . . . 89
- Chautauqua Institution . . . . . . . . . . 92
- City of Yonkers Police Department . . . . . . . . . . 99
- Consolidated Edison Company of New York, Inc. . . . . . . . . . . 100
- Contact—Syracuse, Inc. . . . . . . . . . . 114
- Corning Glass Works . . . . . . . . . . 115
- Craig Developmental Center . . . . . . . . . . 117
- Culinary Institute of America . . . . . . . . . . 118

District Council 37, American Federation of State, County and Municipal Employees, AFL–CIO . . . . . 119
Eastern Massachusetts Association of Land Surveyors, Inc. . . . . . 121
Eastman Kodak Company . . . . . 123
Ebasco Services Incorporated . . . . . 126
Embroiderers' Guild of America, Inc. . . . . . 129
Equitable Life Assurance Society of The United States . . . . . 130
Federal Aviation Administration . . . . . 132
Federal Reserve Bank of New York . . . . . 156
General Dynamics Corporation—Electric Boat Division . . . . . 158
General Electric Company . . . . . 159
Grumman Corporation . . . . . 180
Hotel Association of New York City, Inc., New York Hotel and Motel Trades Council, AFL–CIO . . . . . 187
Hutchings Psychiatric Center . . . . . 190
International Center of Photography . . . . . 191
International Claim Association . . . . . 201
Joint Apprentice Committee of the Electrical Industry, Local Union 3 . . . . . 202
Kings County Hospital Center, School of Anesthesia for Nurses . . . . . 203
Lenox Hill Hospital . . . . . 205
Letchworth Village Developmental Center . . . . . 206
Life Office Management Association, Inc. . . . . . 207
LINK, Inc. . . . . . 212
Literacy Volunteers of Connecticut, Inc. . . . . . 213
Literacy Volunteers of New York State, Inc. . . . . . 214
Manhattan Developmental Center . . . . . 215
Manufacturers Hanover Trust Company . . . . . 216
Marine Midland Bank . . . . . 218
Marsh & McLennan, Incorporated . . . . . 219
McGraw-Hill, Inc. . . . . . 220
Memorial Sloan-Kettering Cancer Center, School of Radiation Therapy Technology . . . . . 223
Merrill Lynch & Co. Inc. . . . . . 226
Misericordia Hospital Medical Center . . . . . 229
Mobil Oil Corporation . . . . . 233
Nassau County Department of Drug and Alcohol Addiction . . . . . 234
Nassau County Police Department . . . . . 235
National Audubon Society . . . . . 237
National Joint Apprenticeship and Training Committee for the Electrical Industry . . . . . 243
New Rochelle Hospital Medical Center . . . . . 244
New York Botanical Garden . . . . . 245
New York City Department of Employment . . . . . 250
New York City Health and Hospitals Corporation, Central School of Respiratory Therapy . . . . . 253
New York City Police Department . . . . . 256
New York Council on Alcoholism, Inc.—ACCEPT . . . . . 261
New York Institute of Credit . . . . . 262
New York State Assembly . . . . . 264
New York State Association of Realtors, Inc. . . . . . 265
New York State Bankers Association . . . . . 267
New York State Commission of Correction . . . . . 269
New York State Department of Civil Service . . . . . 270
New York State Department of Correctional Services . . . . . 272
New York State Department of Labor . . . . . 274
New York State Department of Motor Vehicles . . . . . 276
New York State Department of Social Services . . . . . 277
New York State Department of State . . . . . 278

New York State Division for Youth . . . . . . . . . . 280
New York State Division of Criminal Justice Services—Bureau for Municipal Police . . . . . 281
New York State Division of State Police . . . . . . . . . . 282
New York State Division of Substance Abuse Services . . . . . . . . . . 285
New York State Office of Mental Health . . . . . . . . . . 292
New York Telephone Company . . . . . . . . . . 293
Newark Developmental Center . . . . . . . . . . 307
Northport Veterans Administration Medical Center . . . . . . . . . . 308
Peat, Marwick, Mitchell & Co. . . . . . . . . . . 312
Pepsi-Cola Company, Pepsi-Cola Management Institute . . . . . . . . . . 313
Pilgrim Psychiatric Center . . . . . . . . . . 316
Play Schools Association, Inc. . . . . . . . . . . 317
Port Authority of New York and New Jersey . . . . . . . . . . 318
Port Authority of New York and New Jersey—World Trade Institute . . . . . . . . . . 327
Presbyterian Hospital in the City of New York . . . . . . . . . . 331
Program Management Support Systems, Inc. . . . . . . . . . . 332
Reading Reform Foundation . . . . . . . . . . 333
Red Hook Family Day Care Training Center of New York . . . . . . . . . . 334
St. Luke's—Roosevelt Hospital Center . . . . . . . . . . 336
Seamen's Church Institute of New York . . . . . . . . . . 338
South Nassau Communities Hospital . . . . . . . . . . 340
Southern New England Telephone Company . . . . . . . . . . 344
Sperry Division of Sperry Corporation . . . . . . . . . . 346
Suffolk County Police Department . . . . . . . . . . 350
Texaco, Inc. . . . . . . . . . . 352
Union Carbide Corporation . . . . . . . . . . 353
United Cerebral Palsy Associations of New York State, Inc. . . . . . . . . . . 354
United New York and New Jersey Sandy Hook Pilots' Association . . . . . . . . . . 356
United States Public Health Service Hospital—Staten Island, New York . . . . . . . . . . 358
Vassar Brothers Hospital . . . . . . . . . . 365
Vermont Criminal Justice Training Council . . . . . . . . . . 366
Washington Public Power Supply System . . . . . . . . . . 368
Western Electric Company, Incorporated . . . . . . . . . . 371
Xerox Corporation . . . . . . . . . . 373
YWCA of the City of New York . . . . . . . . . . 381

Section II—Course Descriptions and Credit Recommendations for CETA-Sponsored Courses 383
Chenango County CETA Program . . . . . . . . . . 386
City of Albany Department of Human Resources . . . . . . . . . . 387
City of Buffalo Department of Human Resources, Division for Employment and Training . . . . . . . . . . 389
City of Rochester Office of Employment and Training . . . . . . . . . . 390
City of Yonkers Department of Employment and Training . . . . . . . . . . 392
Delaware County Employment and Training Office . . . . . . . . . . 394
Monroe County Office of Employment and Training . . . . . . . . . . 395
Nassau County Office of Employment and Training . . . . . . . . . . 396
New York State Department of Civil Service . . . . . . . . . . 399
Niagara County Employment and Training Department . . . . . . . . . . 400
Onondaga County Employment and Training Agency . . . . . . . . . . 404
Saratoga County Employment and Training Administration . . . . . . . . . . 406
Westchester County Office of Employment and Training . . . . . . . . . . 407
Summer Adolescent Vocational Exploration Program . . . . . . . . . . 408

Appendix A: List of Evaluators . . . . . . . . . . 413
Appendix B: Program Policies and Procedures . . . . . . . . . . 430
Course Index . . . . . . . . . . 433
Order Form . . . . . . . . . . 457

# BACKGROUND

## HISTORY OF THE PROGRAM

The Program on Noncollegiate Sponsored Instruction is conducted by The University of the State of New York. The purpose of the Program is to review formal educational programs and courses sponsored by noncollegiate organizations and to make appropriate credit recommendations for the courses evaluated. These organizations include business and industry, labor unions, professional and voluntary associations, government agencies, and other organizations whose primary function is not education. The credit recommendations are intended to guide colleges and universities as they consider awarding credit to persons who have successfully completed noncollegiate sponsored instruction. In this way students are assisted in receiving academic recognition for the learning gained in the courses. The Program serves noncollegiate organizations located not only in New York State but throughout the country.

The Program is based on the position that it is sound educational practice to grant academic credit for high quality educational programs conducted by noncollegiate organizations, provided that the courses are at the college level, and that the credit is appropriate to an individual's educational program. Moreover, experience has shown that the awarding of credit for prior learning will in many cases motivate students to enroll in formal postsecondary programs of study. (As a result of special contracts with the New York State Department of Labor, the Program has recommended a small number of CETA-sponsored courses for credit at the secondary level. For further information on the secondary level courses, see Section II of this *Guide*.)

The first step in the development of the Program came in January 1974 when The University of the State of New York initiated a pilot study. During this preliminary stage, evaluations were made of 102 courses sponsored by eight organizations located in New York State. In the process, credit recommendations were established when courses were found to be at the college level, and the components of a model for a reliable and workable review system were identified. The results of the pilot study were published in December 1974 in the first edition of *A Guide to Educational Programs in Noncollegiate Organizations*.

In August 1974 the American Council on Education joined The University of the State of New York in the conduct of the Program. Both agreed to operate under jointly established evaluative policies and procedures approved by both the Council's Commission on Educational Credit and the New York State Board of Regents (see Appendix B). During 1976 the Consortium of the California State University and Colleges and the Commonwealth of Pennsylvania Department of Education joined in the operation of the Program in their respective states.

The 1976 edition of the *Guide*, which was a joint publication of The University of the State of New York and the American Council on Education, reported on courses reviewed during the period from November 1974 to October 1975. Descriptions of the courses reviewed during the pilot study were also included. In September 1977 the American Council on Education withdrew from the joint Program and began to operate its own independent program.

The 1977 edition of the *Guide* reported on the 761 courses conducted by 67 noncollegiate organizations which had been evaluated by The University of the State of New York and had received credit recommendations between January 1974 and July 1977. The 1978 Supplement reported on the 320 courses conducted by 38 organizations which were evaluated and recommended for credit between July 1977 and July 1978. The Supplement also contained modifications of introductory paragraphs and/or course exhibits that appeared in the 1977 edition of the *Guide*. These modifications were made as a result of the Program's regular review process to determine if changes have occurred in previously evaluated courses and, if so, whether the credit recommendations should still apply. The 1980 edition of the *Guide* contained the results of the evaluation of approximately 1,285 courses conducted by 107 organizations between January 1974 and April 1980. For the first time, a special section was devoted to courses conducted by organizations under the Comprehensive Employment and Training Act (CETA). This 1982 edition of the *Guide* reports on the approximately 1,565 courses conducted by 150 organizations which have been evaluated and recommended for credit since 1974. The *Guide* is made available to postsecondary institutions and noncollegiate organizations throughout the country.

The University of the State of New York is the most comprehensive educational organization in the nation. It encompasses and has responsibility for all educational concerns in the State, including private and public higher institutions, elementary and secondary schools, museums, libraries, historical societies, and other agencies whose primary function is education. The Regents and the Commissioner of Education determine the State's educational policies and establish standards for maintaining quality schools. Among other things, they charter educational institutions and organizations, approve and supervise academic programs leading to college degrees, and regulate the preliminary education requirements for admission to the practice of most professions in the State. The New York State Education Department is the executive and administrative arm of the Board of Regents of The University of the State of New York. The Program is administered by the Department's Office on Noncollegiate Sponsored Instruction.

## FOLLOW-UP STUDIES

In the fall of 1976, the Program began a one-year follow-up study, under a contract with the National Institute of Education, to determine if it was beginning to achieve its objectives. The study sought to answer the following questions about practices relating to the Program in New York State during the 1975-76 academic year. Have the credit recommendations been used, and how have they been used by colleges and universities? How have the credit recommendations affected noncollegiate organizations? Who are the student users of the credit recommendations, and what effect have the recommendations had on them? The major findings of the study are summarized here.

A majority (68%) of the 170 postsecondary institutions in New York State that responded to the college survey reported that they had an institutionwide or department policy on using the credit recommendations or were developing such a policy. This represented nearly a doubling in the number of colleges granting credit for noncollegiate sponsored courses since the Program began in 1974. The records of 65 of the institutions indicated that nearly 1,100 students applied for evaluated courses during the 1975-76 academic year, and that 89 percent of them received either credit or course exemptions.

Of the 39 noncollegiate organizations that were surveyed, more than half reported that, since their courses were evaluated, enrollment in those courses which received recommendations had increased, and student performance had improved. Thirty-six percent of the responding organizations were revising additional courses in accordance with the Program's evaluative policies and procedures. Seventy-two percent of the organizations now use these same evaluative criteria when they develop new courses for their employees or members.

The 469 responding students reported that they received credit for 82 percent of the courses that they submitted to colleges during the 1975-76 academic year. Courses were submitted to colleges in New York State and to colleges in other states throughout the nation. Thirty-five percent of the responding students who were not enrolled in college at the time the credit recommendations were established reported that they were motivated to enroll in a college course or degree program because they received credit for noncollegiate sponsored instruction. Since most of the respondents were already enrolled in college, the credit granted to most students for the recommended courses was used to accelerate their study in college programs.

At the completion of the 1976-77 follow-up study, staff decided that the operation of the Program would benefit from the continued collection of data. As a result, a second follow-up study was started to focus primarily on two important questions which were also asked in the first study: 1) Have the credit recommendations been used by adult learners in New York State? 2) Who are the student users of the credit recommendations and what effect have the credit recommendations had on them?

The second follow-up study was a substantially modified version of the first study in other ways, because of limited staff and financial resources. It was possible, however, to survey 13 organizations which represented a cross section of organizations, and individuals, served by the Program. The findings of the second study supported those of the first study.

Seventy-four percent of the 314 responding students who applied for credit during the 1977-78 academic year for courses evaluated through the Program received credit. An additional 25 percent of the 314 students reported that they were still waiting to hear from colleges on their requests for credit. Thus, only one percent of these students had been denied credit at the time of the survey. Thirty-seven percent of the respondents reported that their participation in a course which received a credit recommendation motivated them to enroll in a college course or degree program. The credit recommendations also benefited the students in other ways. Forty-eight percent of them used the credit recommendations to gain job advancements; eight percent used them for salary increments, and seven percent for professional licensure or certification.

Both follow-up studies allowed the Program to assess its impact in New York State. The results indicate that the Program is meeting its established objectives, and that the improvements made in the Program's policies and procedures as a result of the studies have brought about better services to students, noncollegiate organizations, and colleges. In addition, the Program now has available a list of 1,300 colleges in 49 states reported to be granting credit based on the credit recommendations. For more detailed information on either study, or a copy of the list, contact the Program office.

# THE REVIEW PROCESS

The credit recommendations in this *Guide* are established through a thorough and objective evaluation process. The following description is provided to enable users of the *Guide* to understand this process. A more detailed explanation of the evaluative policies and procedures followed in the Program will be found in Appendix B.

Noncollegiate organizations participate in the Program on a voluntary basis. Each sponsoring organization selects courses for review with the assistance of the Program staff. Only educational programs or courses conducted on a formal basis and with official approval of the sponsoring organization are considered for review. Informal training or job experience is not reviewed.

Courses must present what is thought to be college-level material. Classroom-based courses conducted over an extended period of time should contain at least 30 hours of instruction; those offered on an intensive basis should be at least 35 hours in duration. Such courses must have a prescribed program of instruction and be taught by qualified instructors. All courses must include an appropriate method of evaluating student performance. In the case of correspondence and independent study courses, there must be supervised final examinations administered under secure conditions.

Organizations supply the following information for each course submitted for review:

1. A syllabus describing in detail the objectives, content, and methodology of the course.
2. Instructional materials used (textbooks, audiovisual materials, case studies, etc.).
3. Procedures used for measuring the performance of students in the course and samples of the evaluation procedures.
4. Criteria and procedures by which instructors are selected.
5. Educational background and work experience of the students taking the course.
6. Duration of the course.

Each organization also supplies information on the administration of its education activities, including an explanation of procedures for course development and revision, of procedures for recordkeeping and reporting, and of controls to insure uniformity of quality and course content when a course is offered in several locations.

Review teams are normally composed of three persons who are selected from college and university faculties and from noncollegiate organizations. They are selected on the basis of their knowledge and experience in the subject area of the courses to be reviewed. Evaluators are suggested by postsecondary institutions, professional and educational associations, and noncollegiate organizations. (A list of evaluators is found in Appendix A.)

Review sessions are usually conducted at the location of the organization offering the courses. Organizational staff members familiar with the courses are available to answer questions that may arise during the review of the course materials. After a thorough review of all the information and materials supplied by the organization, the team members first decide if a course is at the college level. If it is, they then determine the category of credit (described in the section "How to Use the *Guide*"), the number of credit hours, and the appropriate subject area or areas to recommend. Whenever the team establishes a credit recommendation for a course, it has determined that the method of assessment is adequate to judge that students successfully completing the course have mastered the subject matter. The team members also review each course exhibit (the description of the course that will appear in the *Guide*) to insure that it adequately describes the course.

In some cases, the team may evaluate together a group of two or more related courses which individually are too short to be eligible for review. If appropriate, a single credit recommendation is established for the group of courses, and it applies only when a student has completed all of them.

In other cases, the team may recommend that no academic credit be granted. Reasons given for failure to recommend credit have included: (1) the limited scope or highly technical nature of a course compared to college programs; (2) the lack of college-level materials in the course; (3) the absence of adequate evaluation of student performance; and (4) failure to present sufficient materials on which to make a judgment about a course. Courses for which credit recommendations are not made are not listed in the *Guide*.

# QUESTIONS AND ANSWERS FOR STUDENTS

**How do courses receive a credit recommendation?** Each sponsoring organization selects the courses it would like to have reviewed. The course materials are then given a thorough review by subject matter experts. They determine if a course is at the college level and make the appropriate credit recommendation.

**Who may submit courses for evaluation?** Organizations whose primary purpose is not education may submit for evaluation educational programs or courses conducted on a formal basis. Individual students may *not* submit courses for review. However, they may contact the Program office with the name and address of the training director at the organization that sponsored the course. Program staff will then call the training director to explain the evaluation and credit recommendation process.

**How are the credit recommendations used?** Primarily to obtain college credit or advanced college placement. It may also be possible to use the credit recommendations for entry into new areas of employment, for job advancement, to obtain salary benefits, and for licensure and certification.

**How many credits is each course worth?** The recommended number of credits for each course is listed at the end of each course exhibit. This recommendation is made by a team of subject matter experts when it has determined that a course is at the college level.

*These are recommended credits.* A college is not required to grant a student credit in the amount recommended by the reviewers nor, in fact, is a college limited to that amount should it feel that a person's performance in the course deserves additional credit.

**Is college credit automatically earned when someone successfully completes a course listed in the GUIDE?** No. Successful completion of such a course results in actual college credit only when the course is accepted toward a degree at a postsecondary institution. If you have already taken one of the courses listed in the *Guide*, or plan to take one, you are advised to contact the admissions office at the college in which you are interested to determine the acceptability of the course for academic credit.

**When will credit be awarded?** In most cases a person should apply for credit when formally applying for admission to a college. Some colleges may grant credit only provisionally at that time and withhold full credit until the student successfully completes some courses they offer or a specific number of credits.

**Are policies for granting credit the same in all colleges?** No. Each college sets its own policies, and these vary from college to college. Some colleges may refuse to grant credit for successful completion of a course conducted by a noncollegiate organization for which another college would grant credit. It should also be noted that in some instances a college may not grant credit but may, instead, waive a prerequisite or a required course.

Each institution and, in many cases, each academic unit and department within each institution, sets its own policies for granting credit. The admissions office in a college should be able to guide you to the appropriate official responsible for making the decision for granting credit.

**Do most colleges grant credit for noncollegiate sponsored courses?** A recent survey showed that approximately 70 percent of the responding colleges and universities in New York State use the credit recommendations established by the Program on Noncollegiate Sponsored Instruction as a basis for awarding college credit. The Program maintains a list of colleges nationwide that also use the credit recommendations.

**What if a college wants more information about the courses I took or the evaluation process?** Refer the college official to the Program on Noncollegiate Sponsored Instruction, which operates an advisory service to provide information to colleges on evaluated courses. The address of the office is:

Program on Noncollegiate Sponsored Instruction
New York State Education Department
Cultural Education Center, Room 5A11
Empire State Plaza
Albany, NY 12230
Telephone: (518) 434-0118

**How are student records for courses listed in the GUIDE reported to colleges?** The organization sponsoring a course you have completed will provide an official record at your request. The official record will enable a college official to verify that you successfully completed the course and the date of completion. The source of official student records for each organization is noted in the introduction under each organizational heading.

**Is credit awarded for courses listed in the GUIDE as "good" as credit earned on a campus?** Yes. When an institution grants you credit for a course sponsored by a noncollegiate organization, this credit has as much value toward a degree as does credit earned through regular college courses.

**Do colleges charge a fee for granting credit for courses listed in the GUIDE?** A recent survey indicates that less than 10 percent of the 170 New York State colleges responding to the survey charge students a fee for crediting noncollegiate sponsored courses. Generally, institutions that charge a fee do so to defray the costs of evaluating an individual student's prior learning, which may include noncollegiate sponsored courses.

**When did the Program become involved in making credit recommendations at the secondary level?** In 1977, Congress amended the Comprehensive Employment and Training Act (CETA) by passing the Youth Employment and Demonstration Projects Act (YEDPA). One of the primary concerns of this act was that arrangements be worked out at state and local levels whereby in-school and out-of-school youth have the opportunity to gain academic credit for knowledge and skills acquired in CETA training programs. The Program was able to make an immediate response to the educational requirements of this legislation because of its experience in evaluating noncollegiate sponsored instruction. In 1977, with the support of a grant from the New York State Department of Labor, the Program began evaluating CETA training programs. The level of credit recommendations for CETA training programs has ranged from one unit in an elective area toward the completion of the requirements for a high school diploma to from 1 to 18 hours in the lower division baccalaureate/associate degree category.

**How do I go about getting a secondary-level credit recommendation for a CETA training program I have completed accepted by a secondary school?** Your prime sponsor is responsible for keeping records or transcripts of your participation in a training program that has received a credit recommendation. It is up to you to request that your prime sponsor send your transcript to your high school. Each high school principal decides whether his or her school will accept a given credit recommendation established by the Program.

**Can credit be earned for a course completed in the past or taken from a former employer?** Yes. The credit recommendation established for each course described in the *Guide* can be used by anyone who successfully completed the course during the period listed in the "Dates" section of each course exhibit. When "Present" is given as the second date, this indicates that the course is still being offered by the organization as of the publication date for this *Guide*. Each organization listed in the *Guide* keeps records of its present and former employees who completed the courses during the periods indicated and will supply them upon request.

**Can one earn credit for courses offered by noncollegiate organizations but not listed in the GUIDE?** Yes. Some institutions will evaluate students' knowledge individually, often by means of examinations. There are also nationwide proficiency examination programs which may be used to validate study in courses not listed in the *Guide*. A growing number of colleges and universities accept credits earned through these examinations.

The New York State Education Department administers the College Proficiency Examination Program (CPEP) and the Regents External Degree Examinations (REDE). Besides being offered four times a year in New York State, most CPEP and RED examinations are administered around the world by the American College Testing Program (ACT). For information on testing in New York State write to:

RED-CPE Program
New York State Education Department
Cultural Education Center, Room 5D45
Empire State Plaza
Albany, NY 12230

For information on testing outside of New York State write to:

ACT Proficiency Examination Program
American College Testing Program
P.O. Box 168
Iowa City, IA 52240

The College Entrance Examination Board administers the College-Level Examination Program (CLEP). To obtain more information on CLEP write to:

College-Level Examination Program
P.O. Box 1821
Princeton, NJ 08540

# QUESTIONS AND ANSWERS FOR ADMINISTRATORS AND FACULTY

**Should the applicant receive special consideration for education gained in noncollegiate organizations?** Credit for those courses evaluated by the Program on Noncollegiate Sponsored Instruction should be considered on the same basis as credit accepted by transcript from another institution. In this connection, institutions generally will require the applicant to furnish full information about previous college-level studies and a proposed future program of study before granting credit for such courses.

**Are the credit recommendations advisory only?** Yes. Each institution is free to accept, modify, or reject them in accord with its stated academic policies and procedures. The recommendations are based on consultants' review of content, level of complexity, educational quality, and objectives of the programs and courses offered by the noncollegiate organizations.

**How should a grade from a noncollegiate organization be interpreted?** Grading systems vary widely among noncollegiate organizations. Some organizations use letter or numerical grades, while many organizations award certificates of successful completion on a pass/fail basis, and no attempt has been made to convert them to traditional grading systems. A recommendation of academic credit for a course taken in a noncollegiate organization should, therefore, be interpreted as being applicable when the student presents official evidence of having successfully completed or passed the course.

**How should credit recommended for educational programs in noncollegiate organizations be applied to the individual's program of study?** Credit can be granted in either required or elective areas, provided the particular course and credit recommendation are appropriate to the individual's program of study.

**What credit should be granted if the educational program in a noncollegiate organization duplicates specific courses in a postsecondary institution?** In these instances credit for a course taken in a noncollegiate organization should be granted only if the student has not completed a comparable college course. Most often, however, these educational programs do not exactly duplicate college courses, but do contain instruction applicable to a general area of collegiate study. In such cases credit can be granted toward required or elective courses in the area, depending on the instructional program at the institution and the specific educational objectives of the individual.

**What credit should be granted when the applicant has completed several courses in a noncollegiate organization which are apparently in the same subject areas and at the same level?** An appropriate official should carefully review the descriptions of all courses in the same subject area which the person has completed and for which credit is recommended. If it appears that instruction is duplicated among the several courses, officials may wish to apply the credit recommendations so as to avoid granting duplicate credit for the courses.

**What is the maximum amount of credit that should be granted for courses taken in noncollegiate organizations?** The amount of credit granted should be appropriate to the individual's educational background and goals, and to the policies of the institution. Thus, the maximum amount of credit awarded for courses taken in noncollegiate organizations will vary according to individual circumstances.

**Should the applicant present official records proving successful completion of an educational program conducted by a noncollegiate organization?** Educational institutions should require the applicant to verify the fact that he or she has successfully completed such a program or course by having official records submitted. The introduction for each organization listed in the *Guide* indicates the appropriate source of official student records.

**When did the Program become involved in making credit recommendations at the secondary level?** In 1977, Congress amended the Comprehensive Employment and Training Act (CETA) by passing the Youth Employment and Demonstration Projects Act (YEDPA). One of the primary concerns of this act was that arrangements be worked out at state and local levels whereby in-school and out-of-school youth have the opportunity to gain academic credit for knowledge and skills acquired in CETA training programs. The Program was able to make an immediate response to the educational requirements of this legislation because of its experience in evaluating noncollegiate sponsored instruction. In 1977, with the support of a grant from the New York State Department of Labor, the Program began evaluating CETA training programs. The level of credit recommendations for CETA training programs has ranged from one unit in an elective area toward the completion of the requirements for a high school diploma to from 1 to 18 hours in the lower division baccalaureate/associate degree category.

# HOW TO USE THE GUIDE

*A Guide to Educational Programs in Noncollegiate Organizations* is intended for use in the academic counseling of students. The credit recommendations and course descriptions provide information to education officials as they consider granting credit to students for learning acquired in noncollegiate settings.

In order to make the best use of the *Guide*, careful consideration should be given to this section. It explains how to locate a particular course exhibit, how to interpret course exhibits, how the credit recommendations might be used, and how to receive assistance from the Program on Noncollegiate Sponsored Instruction.

The courses listed in the *Guide* represent only a small sample of the educational programs conducted by the participating organizations. Many other organizations in the United States conduct a wide range of high quality educational programs for their employees or members. These are not included in the *Guide* because they have not been submitted for review. Readers are cautioned against making adverse judgments about the educational programs of any noncollegiate organization merely because they are not listed here. Students who have completed such courses and are seeking college credit for them should be given every consideration in accordance with institutional policies and practices.

Only those courses for which credit recommendations have been made are listed in the *Guide*. However, the Program office will inform college officials, upon request, if a particular course for one of the participating organizations was reviewed and no credit was recommended.

## Format of the Guide

The *Guide* is divided into two sections. Section I contains course exhibits for courses which have been reviewed and recommended for credit since the Program began in January 1974. Section II contains exhibits for courses conducted by organizations under the Comprehensive Employment and Training Act (CETA) and recommended for credit.

## How to Locate a Course Exhibit

Each course in the *Guide* is listed in the Course Index alphabetically by title under the name of the organization that offers it. Therefore, it is necessary to identify the sponsoring organization before a course can be located. In those cases in which a group of courses that form an integrated program is reviewed, the program title is also listed in the Course Index.

## How to Read a Course Exhibit

After each organizational heading there is an introduction that provides general information about the organization, its training and educational activities, and the source of official records of student performance in its courses. Following the introduction, each course exhibit identifies the course and provides specific information about the course content and the credit recommendation.

Each course exhibit provides the following information:

**Title:** Official course title used by the organization. In some cases, an additional title or subtitle has been assigned by the review team for purposes of explanation and clarity; this title, listed in parentheses below the official title, is not used by the organization.

**Course Number:** Official course number, when provided by the organization, in parentheses following the course title.

**Location:** The site(s) where the course is offered. Correspondence and independent study courses are identified as such.

**Length:** Duration of the course in contact hours and, when appropriate, in days or weeks. The length is followed by any additional relevant information describing the course. The term "residential" indicates that the students reside at the location where the course is given for the duration of the course. Correspondence and independent study courses are identified as such.

**Dates:** The beginning and ending dates of the course, expressed by month and year. The dates cover the period during which the course has been offered with substantially the same content and procedures as at the time of its review; the credit recommendation applies to a person who successfully completed the course during that period. The first date indicates the time from which the recommendation first applies; the second, the time at which the recommendation ceases to apply. When "Present" is given as the second date, it indicates that the recommendation applies as of the publication date of this edition of the *Guide*. Credit recommendations are backdated no more than 10 years prior to the review date.

**Objective:** The purpose for which the course is offered.

**Instruction:** A description of the major topics covered, and teaching methods, materials, and equipment used. Together, the objective and instructional description supplement the credit recommendation by providing essential information about the nature of the course.

**Credit recommendation:** The category of credit, the number of semester hours recommended, the appropriate subject area(s), and the date reviewed.

1. *Categories of Credit:*

   *a. Units of Secondary Credit.* This category includes course work found in programs leading to a high school diploma. Course content would usually be applicable for credit in an elective area.

   *b. Vocational Certificate.* This category includes course work normally found in yearlong certificate programs which are designed to provide students with occupational skills; in many two-year institutions, they are also found in curricula leading to associate degrees in technical programs. Course content is specialized, and the accompanying shop training emphasizes procedural rather than analytical skills.

   *c. Lower Division Baccalaureate/Associate Degree.* This category includes course work found in programs leading to the Associate in Arts, Associate in Science, and Associate in Applied Science degrees, and introductory-level course work normally found in baccalaureate programs. Emphasis is on learning basic principles that have broad, judgmental application.

   *d. Upper Division Baccalaureate.* This category includes course work usually completed during the last two years of a baccalaureate program. The courses generally involve specialization of a theoretical or analytical nature beyond the introductory level.

   *e. Graduate Degree.* This category includes course work leading to a graduate degree. The courses tend to be oriented toward independent study, original research, critical analysis, and the scholarly and professional application of the specialized knowledge within the discipline.

   NOTE: In some instances, credit is recommended in more than one category. A decision must be made by the college as to which category of credit best applies to a student's educational program.

2. *Semester Hours:* All credit recommendations are made in semester hours. Credit recommendations are *not* derived by simple arithmetic conversion of contact hours to semester hours; the review teams base their recommendation on both the range and level of complexity of the subject matter covered and the number of contact hours.

3. *Subject Area(s):* In alphabetical order, the recommended subject area(s) in which credit might be applied. The designation of these general areas does not exclude the application of the credit recommendation to other areas not mentioned in the course exhibit.

4. *Date of Review:* The month and year in which the credit recommendation was established is listed in parentheses following the subject area(s).

## Verifying Student Records

Students who apply for credit for courses conducted by noncollegiate organizations should be required to submit official records to verify that a course was successfully completed. Each organization will supply official records at a student's request. The source of official records for each organization is identified in the introduction section for each organization.

## Awarding Credit Based on the Recommendations

Course information and credit recommendations are provided in the *Guide* to assist college officials in assessing the applicability of a student's education in a noncollegiate organization to his or her program of study. Actual credits granted will depend on an institution's degree requirements and general policy on granting credit for college-level learning achieved outside that institution, and the student's prior educational background.

Credit for each course may be applied to a student's program of study in various ways: (a) applied to the major to replace a required course, (b) applied as an optional course within the major, (c) applied as a general elective, or (d) applied to waive a prerequisite.

## Duplication of Credit

Each course listed in the *Guide* is reviewed on the assumption that a student takes only that course. However, since a student may take several courses which are apparently in the same subject area and at the same academic level, institution officials should carefully review the course objective and instructional description in the *Guide* for each course the student completed and for which credit is requested. If it appears that major topics of instruction are duplicated among the several courses, officials may wish to adjust the credit recommendations in order to avoid granting duplicate credit.

## Assistance From Program Staff

Information on the evaluation and credit recommendation system is provided to organizations, colleges, and individual students by the staff of the Program on Noncollegiate Sponsored Instruction.

Publication of *A Guide to Educational Programs in Noncollegiate Organizations* is the primary means of disseminating the results of course evaluations. The *Guide* is sent to several officials in each college in New York State, to colleges in all other states, to the noncollegiate organizations participating in the Program, and to other interested individuals and organizations. Since evaluations are conducted on a regular basis, credit recommendations continue to be established for new courses and organizations. After each evaluation, an organization is sent the official descriptions and credit recommendations for the courses which were evaluated as well as a letter explaining that the courses will appear in the next edition of the *Guide*. To keep colleges informed, new courses are listed in the Program's newsletter, *News & Views*. Published four times yearly, *News & Views* is sent to all colleges in the State, interested colleges in other states, and a large number of individuals and noncollegiate organizations. On request, Program staff will furnish more specific information on the courses listed in the *Guide* and *News & Views*, and offer assistance in the interpretation and use of published results.

It is the Program's general policy to publish in the *Guide* those courses for which credit is recommended. A course might not be included for one of several reasons: (1) it has not been submitted for evaluation, (2) it has been reviewed since publication of the *Guide*, (3) it has been evaluated and has not received a credit recommendation, and (4) credit has been recommended, but the sponsoring organization, for its own reasons, has requested that the course not be publicized. Whatever the case, Program staff will respond to individual requests about the status of an organization's courses.

*Using the Credit Recommendations: A Handbook for Noncollegiate Organizations* is designed to help organizations make the most effective use of the credit recommendations established for their educational programs or courses. It contains information on publicizing the credit recommendations, maintaining and transmitting official records of students' performance in noncollegiate sponsored courses, developing cooperative relationships with local colleges and universities, and obtaining various kinds of assistance from Program staff. There is also a section devoted to questions and answers about the uses that can be made of the credit recommendations.

With support from the Fund for the Improvement of Postsecondary Education, the Program has developed educational advisement services within three organizations whose courses have been recommended for credit. Employees of the Albany City Department of Human Resources (CETA), the New York State Department of Labor, and the New York Telephone Company have been trained as educational advisors. These advisors provide information and counseling to their colleagues not only on the use of the Program's credit recommendations, but on the whole range of educational opportunities available to them. With the experience gained in this pilot project, Program staff can help other participating noncollegiate organizations develop advisement services appropriate to each organization's structure and needs. Such services place the credit recommendations in a larger educational and career context, thus encouraging their use in ways that are purposeful for the student and the organization.

For assistance from Program staff, contact:

Program on Noncollegiate Sponsored Instruction
New York State Education Department
Cultural Education Center, Room 5A11
Empire State Plaza
Albany, NY 12230

Telephone: (518) 434-0118

# SECTION I

# AGWAY INC.

Agway Inc. is a farm supply and food marketing cooperative business organization owned by more than 123,000 farmer-member stockholders. The organization serves agriculture in 12 northeastern states. In addition to providing numerous farm production supplies and marketing some of the products raised by its members, Agway is a diversified organization involved in petroleum, insurance, and sales financing. In 1975, total employment was approximately 10,200 persons.

The educational programs and courses offered by Agway for its employees are designed to provide practical training, opportunity for personal development, and opportunity for improved performance and future development. In addition to offering a variety of training and development programs, Agway utilizes an assessment center to help employees formulate career plans and identify educational needs.

Source of official student records: Director of Training, Agway Inc., Training Center, 9 Adler Drive, East Syracuse, New York 13057.

## AGWAY INSURANCE

Source of official student records: Administrative Sales Manager-Insurance, Agway Inc., Box 4851, Syracuse, New York 13221.

### Life and Accident and Health Insurance

**Location:** Agway Insurance, Dewitt, NY.

**Length:** 48 hours (5-1/2 days).

**Dates:** January 1975—June 1981.

**Instruction:** Survey of life and health insurance contracts, policy provisions, and principles.

**Objective:** To provide the student with product knowledge of the various life and accident and health insurance contracts; to prepare the student for State licensing examinations in these areas.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Life and Health Insurance (1/76).

### Property and Casualty Training Course

**Location:** Agway Insurance, Dewitt, NY.

**Length:** 120 hours (3 weeks).

**Dates:** September 1973—June 1981.

**Objective:** To provide the student with product knowledge of the various property and casualty insurance contracts; to prepare the student for his/her State property and casualty insurance licensing examination.

**Instruction:** Survey of property and casualty insurance contracts, policy provisions, and principles.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Property and Casualty Insurance (1/76).

---

### Agway Management Development Program (Retail Management)

**Location:** Agway Training Center, East Syracuse, NY, and individual divisional headquarters.

**Length:** **Version 1:** 118 hours (50 weeks); formal classroom sessions and programmed instruction.

**Version 2:** 96 hours (52 weeks); formal classroom sessions and programmed instruction.

**Dates:** **Version 1:** August 1975—September 1977.
**Version 2:** September 1977—June 1981.

**Objective:** To provide the student with a general orientation to the field of management as applied to retail operations.

**Instruction:** **Version 1:** Retail management operations including balance sheet, operating statement, credit and accounts receivable, control of cash, inventory management, personnel, services, grain marketing, merchandising, production and distribution, and wage and salary; managerial functions (planning, organizing, directing, coordinating, and controlling); affirmative action accountability, financing, leadership development, leadership styles, management by goals, and motivation; advertising and sales promotion. **Version 2:** Retail management operations including balance sheet, operating statement, credit and accounts receivable, control of cash, inventory management, personnel, services, merchandising, production and distribution, and wage and salary; managerial functions (planning, organizing, directing, coordinating, and controlling); affirmative action accountability, financing, leadership development, management communications skills and motivation; advertising and sales promotion.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Retail Management (11/75).

## Introduction to Systems Analysis

**Location:** Corporate headquarters, Dewitt, NY.
**Length:** 30 hours (10 weeks).
**Dates:** March 1975—June 1981.
**Objective:** To provide the student with an understanding of systems theory and project management techniques required to design and develop management information systems.

**Instruction:** Systems theory with special emphasis on network analysis (CPM and PERT); systems analysis; communication theory; techniques to evaluate alternative solutions regarding new information systems; project management. Student assignments consist of interviews, research, and the development of an information systems model.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Computer Science or Management (10/76).

20

# AMERICAN BANKERS ASSOCIATION
# STONIER GRADUATE SCHOOL OF BANKING

The Stonier Graduate School of Banking is sponsored by the American Bankers Association, the national organization of the banking industry. The Association's total membership includes some 18,000 banks, or about 97 percent of the nation's commercial banks.

The purpose of Stonier's educational program is to develop bank managers for future responsibilities. The student body is composed of bank officers and officials of bank regulatory agencies. The program involves three two-week resident sessions on campus at Rutgers University over a period of three years and ten between-session extension problems, together with a thesis requirement. There is regular use of case studies, prep groups, lectures, question/answer sessions, and computer-based simulation games.

The curriculum is designed to serve executives of small banks as well as officers of large, departmentalized institutions. Focal points of the program are the tools of bank management and the provision of an analytical framework within which general management problems can be recognized and solved. The emphasis is on basic policy and management problems, as distinguished from specialized skills and the how-to details and mechanics.

For evaluation purposes, topics taken throughout the three-year program were grouped together into five courses. Thus, students requesting credit must have completed the entire program.

Source of official student records: Registrar, Stonier Graduate School of Banking, 1120 Connecticut Avenue, N.W., Washington, D.C. 20036.

## Business Policy

**Location:** Rutgers University, New Brunswick, NJ.

**Length:** 36 hours; approximately 150 hours of independent study.

**Dates:** June 1969—Present.

**Objective:** To provide the student with the opportunity in the last year of the program to formulate decisions and determine strategies of managing a financial institution through a management interactive game.

**Instruction:** This course culminates the three-year program by allowing the student to make decisions and determine policy on loans, deposits, investments, capital dividend policy, marketing, pricing, premise policy, cost control, planning, and liquidity management. Theory and practical experience are merged through the computer model and lectures. The student assumes the role of upper management in making vital decisions affecting the future of the firm.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Management (6/77). NOTE: The entire three-year program must be completed for the student to receive credit.

## Commercial Banking

**Location:** Rutgers University, New Brunswick, NJ.

**Length:** 45 hours; approximately 75 hours of independent study.

**Dates:** June 1967—Present.

**Objective:** To provide the student with a thorough understanding of the varied functions performed in modern commercial banks.

**Instruction:** Covers a wide range of topical and functional areas including bank credit, bank marketing, and consumer banking. Students also can select from other subject areas including accounting, real estate, profit planning, and cash management. Extensive use of the case method.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Finance or Management (6/77). NOTE: The entire three-year program must be completed for the student to receive credit.

## Macroeconomics

**Location:** Rutgers University, New Brunswick, NJ.

**Length:** 35 hours; approximately 100 hours of independent study.

**Dates:** June 1967—Present.

**Objective:** To provide the student with an understanding of the principles of macroeconomics, with particular emphasis on the institution, policies, and problems within the American economic system today.

**Instruction:** National income accounts; the role of money and the banking system in the money and capital markets and the functioning of these markets; fiscal and monetary policies as they influence such issues as aggregate demand, employment, debt management, and inflation; simulation models in forecasting; the operation of the international economy, including the international payments system. Lectures and discussion are used, along with between-session extension problems.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Economics (6/77). NOTE: The entire three-year program must be completed for the student to receive credit.

## Management of Commercial Banks

**Location:** Rutgers University, New Brunswick, NJ.

**Length:** 45 hours; approximately 75 hours of independent study.

**Dates:** June 1967—Present.

**Objective:** To provide management skills in a variety of activities in a commercial bank.

**Instruction:** Covers specific management concepts and problems such as the Electronic Funds Transfer System, managing social responsibility programs, bank insurance and risk management, and bank holding companies. Special emphasis on the asset and liability responsibilities of modern bank management. Integrates general human relations and personnel concepts. Employs the case method for skill development.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Management (6/77). NOTE: The entire three-year program must be completed for the student to receive credit.

## Thesis or Assigned Research Project

**Location:** Rutgers University, New Brunswick, NJ.

**Length:** Independent study; a minimum of 200 hours.

**Dates:** June 1967—Present.

**Objective:** To provide the student with the skills needed to conduct and present original research.

**Instruction:** During the last year of the program each student is required to prepare a thesis on a subject of his/her own choosing that is related to some current aspect of banking or to complete an assigned research project. Either choice requires original thinking and fact finding, and requires that the student submit a finished report involving a systematic organization of subject matter, original expression of ideas, authoritative documentation, and logical conclusions. Both assignments are comparable in terms of analytical requirements, writing skills, and length.

**Credit recommendation:** In the graduate degree category, [illegible] semester hours to satisfy thesis or research methods requirements (6/77).

# AMERICAN INSTITUTE FOR CREATIVE LIVING

The American Institute for Creative Living is a nonprofit counseling agency staffed by psychiatrists, psychologists, psychiatric social workers, and counselors who provide services for children, adolescents, and adults. Founded in 1970, the Institute is fully accredited by the International Association of Counseling Services (A.P.G.A.) and has facilities located in Staten Island, Brooklyn, and Morrisville, Pennsylvania.

In order to keep pace with changes in the counseling field and to provide practical training, the Institute has developed a variety of inservice courses aimed at developing professional expertise. Teaching is conducted by the clinical staff. Students attend small, seminar style classes, work under close supervision, and receive individual training according to their needs. The courses are open to regular Institute staff, adjunct staff from other community agencies, teachers, clergy, health care providers, and volunteers.

Source of official student records: Director of Training, American Institute for Creative Living, 2295 Victory Boulevard, Staten Island, New York 10314.

## Adolescent and Adult Development

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 45 hours (15 weeks).

**Dates:** January 1979– Present.

**Objective:** To provide the participant with basic theoretical knowledge of adolescent and adult development, emphasizing the older years.

**Instruction:** Physical, cognitive, and social-emotional development during early, middle, and late adolescence; adult changes, adjustments, and reorientations; changes in adaption processes during the older years.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Behavioral Science, Education, Psychology, or Social Work (7/80).

## Advanced Group Dynamics I

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 92 hours (23 weeks).

**Dates:** July 1980—Present.

**Objective:** To provide the participant with self-understanding through an ongoing psychoanalytic group experience, and to develop the participant's understanding of the dynamics and skills necessary to conduct psychoanalytic and other counseling groups.

**Instruction:** Survey of the following theories and techniques: behavior modification; encounter group; existential-experiential; Gestalt; group interaction-interrelationships; problem solving; psychodrama; T-group; Tavistock. Special emphasis on the psychoanalytic group model. Lecture and discussion with illustration through participation in an ongoing analytic group experience and private consultation sessions. Use of video playback of group process.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Education, Psychiatric Nursing, Psychology, or Social Work (6/81).

## Advanced Group Dynamics II

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 92 hours (23 weeks).

**Dates:** January 1981—Present.

**Objective:** To provide the participant with self-understanding through an ongoing psychoanalytic group experience, and to enable the participant to develop skills necessary to conduct psychoanalytic and other counseling groups in various human service agencies.

**Instruction:** Continuation of Advanced Group Dynamics I with further study of the analytic model for deeper self-understanding. Special emphasis on the T-group as used for home, school, office, and community. Lecture and discussion with illustration through participation in an ongoing analytic group experience and private consultation sessions. Use of video playback of group process.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Education, Psychiatric Nursing, Psychology, or Social Work (6/81).

## Basic Interviewing Skills

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 45 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To provide participants from the helping professions with knowledge of, and practice in the use of, basic interviewing skills.

**Instruction:** Proper setting; initial interview; opening and closing of interviews; effecting change; understanding the client; recording the interview; defenses; silences; questions; interpretation; client self-exploration; empathy; genuineness; respect; concreteness; motivation; confrontation; problem solving.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Behavioral Science, Education, Psychology, or Social Work (7/80).

## Counseling the Addictive Person

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 50 hours (20 weeks).

**Dates:** September 1980—Present.

**Objective:** To provide the participant with an overview of the psychological, sociological, physiological, and legal aspects of addictions, and an exposure to current major treatment strategies.

**Instruction:** Predisposing and reinforcing psychosocial factors in the addictive personality, including family and interpersonal dynamics, primary and secondary gains, and defenses that interfere with breaking habits. Exploration of various intervention strategies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Behavioral Science, Criminal Justice, Education, Psychology, or Social Work (6/81).

## Counseling the Adolescent

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 50 hours (20 weeks).

**Dates:** September 1980—Present.

**Objective:** To provide the participant with a knowledge of adolescent problems, ways of diagnosing these problems, and the various modalities of adolescent counseling.

**Instruction:** Review of adolescent developmental diagnostic categories; introduction to particular adolescent problems (sex, crime, authority) and various modalities of adolescent treatment. Clinical case presentations by instructor and class. Use of closed circuit video of live sessions. (Prerequisites: Adult Development, Basic Interviewing Skills, and a course in psychopathology, or equivalent courses.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Behavioral Science, Criminal Justice, Education, Psychology, or Social Work (6/81).

## Counseling the Child

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 50 hours (20 weeks).

**Dates:** September 1980—Present.

**Objective:** To provide the participant with knowledge and skills in the identification and evaluation of the unique problems of children.

**Instruction:** Review of child development; diagnostic categories; referral process. Treatment strategies: play therapy; hypnosis; parent counseling; individual versus group counseling. Special problems in child counseling, such as fearful, aggressive, handicapped, depressed, suicidal, and institutionalized children. Skill practice in the use of various treatment modalities.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Behavioral Science, Education, Psychology, or Social Work (6/81).

## Counseling the Couple

Refer to Counseling the Family and Couple.

## Counseling the Elderly

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 50 hours (20 weeks).

**Dates:** February 1981—Present.

**Objective:** To provide the participant with an understanding of the unique problems of the elderly and the knowledge of appropriate approaches for coping with such problems.

**Instruction:** Developmental problems of later adulthood; prejudicies, myths, and stereotypes. Counseling the elderly with emphasis on such problems as retirement, illness and disability, depression, death and dying, bereavement, sexuality, and alcoholism.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Behavioral Science, Education, Nursing, Psychology, or Social Work (6/81).

## Counseling the Family

Refer to Counseling the Family and Couple.

## Counseling the Family and Couple
## 1. Counseling the Family
## 2. Counseling the Couple

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 1. 50 hours (20 weeks).
2. 50 hours (20 weeks).

**Dates:** February 1981—Present.

**Objective:** **Course 1:** To teach the participant the major theories and techniques of family counseling, and to impart to the participant basic skills in assessing the dynamics of the family and in developing a treatment plan. **Course 2:** To teach the participant the major theories and techniques of couple counseling, with emphasis on evaluation and assessment.

**Instruction:** **Course 1:** Introduction to family therapy theories, including system theory, communication theory, structural theory, transactional analysis theory, developmental theory, and psychoanalytic theory. Overview of, and practice in, basic techniques in family counseling, including self-confrontation, transference, resistance, sculpting, networking, catharsis, desensitization, reinforcement, and extinction. Clinical case presentations by instructor and class. Use of closed circuit video of live sessions. **Course 2:** Conducting the initial interview; beginning, middle, and terminating phases of treatment; obstacles, interventions, facilitating communication; reeducation of attitudes, perceptions, misconceptions. Special couple problems: sexual; premarital; divorce; middle age; alcoholism. Case presentations by instructor. Skill practice in the use of various treatment modalities. Use of closed circuit video of live sessions. (Prerequisite: Counseling the Family.)

**Credit recommendation: Course 1:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Behavioral Science, Criminal Justice, Education, Psychology, or Social Work (6/81). **Course 2**: In the graduate degree category, 3 semester hours in Education, Psychology, or Social Work (6/81). NOTE: Credit should be granted for Course 2 only after completion of Course 1.

### Infant and Child Development

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 45 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To provide the participant with basic theoretical knowledge of infant and child development.

**Instruction:** Development of physical, motor, mental, social-emotional, and creative abilities in infants and children.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Behavioral Science, Education, Psychology, or Social Work (7/80).

### Introduction to Cognitive and Behavioral Approaches to Counseling

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 45 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To familiarize participants from the helping professions with counseling theories and techniques.

**Instruction:** Relationship enhancement; attitude modification; cognitive change; modeling; simulation and role playing; operant conditioning; fear reduction; aversion; self-management; hypnosis and suggestion; group methods; automated methods. Major emphasis is placed on cognitive and behavioral approaches.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Behavioral Science, Education, or Psychology (7/80).

### 1. Introduction to Group Dynamics I
### 2. Introduction to Group Dynamics II

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 1. 82 hours (23 weeks).
2. 82 hours (23 weeks).

**Dates:** January 1979—Present.

**Objective:** To provide the participant with a basic knowledge of group counseling skills through use of theoretical material, an ongoing group experience, and individual conferences.

**Instruction:** Curative factors in group counseling; tasks and techniques of the counselor; selection of clients; purpose and type of group; formative stages of the group; the advanced group; problem patients.

**Credit recommendation:** In the upper division baccalaureate category, 8 semester hours in Behavioral Science, Education, Psychology, or Social Work (7/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

### 1. Psychopathology I
### 2. Psychopathology II

**Location:** 2295 Victory Boulevard, Staten Island, NY.

**Length:** 1. 45 hours (15 weeks).
2. 45 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To introduce the participant to the major mental disorders through use of theoretical material, case examples, and discussion.

**Instruction:** The myth of normality; history of mental illness; organic basis of personality disorganization; cultural factors in personality disorganization; transient stress, personality, and psychoneurotic disorders, mental retardation; forms of therapy.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Behavioral Science, Education, Psychology, or Social Work (7/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

# AMERICAN INSTITUTE OF BANKING

The American Institute of Banking (AIB) is an educational arm of the American Bankers Association, the national association of the banking industry. Its total membership includes some 18,500 banks and branches, about 97 percent of the nation's commercial banks. AIB is part of the Education Group, one of the six working groups of the Association.

The major purpose of AIB is the education and training of bank personnel. AIB consists of a network of over 500 chapters throughout the United States and more than 100,000 annual enrollments in individual courses. Each chapter functions autonomously, initiating and financing its own activities. AIB chapters attempt to meet the needs of local bank personnel through courses, seminars, and other educational activities. Each chapter selects its own instructors, arranges for classroom space, promotes its offerings, and handles related financing. Because each chapter is autonomous, credit recommendations established for courses offered by a specific chapter apply only to that chapter.

# AMERICAN INSTITUTE OF BANKING ALBANY CHAPTER

The Albany Chapter of the American Institute of Banking (AIB) provides academic and professional courses in contemporary areas of banking activities for employees of 24 banking institutions in Albany, Columbia, Greene, and Rensselaer counties.

The courses listed below constitute the majority of the offerings within the Chapter's Basic, Standard, and Advanced Programs. These programs combine academic and technical banking curricula frequently not duplicated in collegiate or vocational institutions. These courses are taught in classrooms provided by banks and colleges throughout the Albany area.

Please note that the credit recommendations listed below apply *only* to courses offered by the Albany Chapter of AIB.

Source of official student records: Permanent Secretary, American Institute of Banking, 11 North Pearl Street, Home Savings Bank Building, Albany, New York 12207.

## Accounting: Principles and Applications, Part One

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1968—Present.

**Objective:** To provide the student with a basic understanding of accounting theory and practice, including the preparation of financial statements.

**Instruction:** Fundamentals of accounting theory. Use of journals and ledgers; the preparation of financial statements; accounting for notes and interest; the use of a voucher system.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (8/76).

## Accounting: Principles and Applications, Part Two

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1975—Present.

**Objective:** To provide the student with an advanced understanding of accounting principles and practices, including corporation accounting.

**Instruction:** A continuation of Accounting, Part One. Accounting for partnerships; corporation accounting; departmental accounting; inventory valuation; plant assets and depreciation; manufacturing cost accounting; basic statement analysis.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (8/76).

## Analyzing Financial Statements

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** August 1966—Present.

**Objective:** To provide the student with an understanding of the characteristics of financial statements and procedures of analysis.

**Instruction:** The principles and policies involved in the appraisal of credit risks by analysis of accounting statements of financial condition. Concepts, characteristics, and tools of financial statements; financial statement analysis (ratio analysis, liquidity analysis, and earnings analysis); balance sheets and operating statements; tests used in appraising financial statements of various industries as a basis for credit.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking or Finance (8/76).

## Bank Investments

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1968—Present.

**Objective:** To provide the student with an understanding of bank management of the securities portfolio.

**Instruction:** Description of the nature of primary reserves and loanable funds and how their uses are determined; analysis of the primary and secondary reserve needs of commercial banks, the sources of reserves, their random and cyclical fluctuations, and the influence of these factors on investment policy; a study of yield changes as they affect a bank's long-term holdings. (Prerequisite: Money and Banking or equivalent experience.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking, Business Administration, or Finance (8/76).

## Bank Letters and Reports

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** August 1966—Present.

**Objective:** To provide the student with the skills necessary to write professional letters and memos.

**Instruction:** Fundamental principles underlying quality correspondence; different types of bank-written communications (collection letters, letters pertaining to loans and trusts, and departmental and branch reports).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Communications (8/76).

## Business Administration

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide the student with an understanding of business and the methods and procedures used in making business decisions and a familiarity with business terminology.

**Instruction:** Business and society; ownership, organization, and management; marketing; finance; quantitative controls; legal and regulatory environment of business.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration (5/77).

## Credit Administration

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** August 1966—Present.

**Objective:** To provide the student with a basic understanding of credit administration.

**Instruction:** The principles of credit and loan administration; working capital loans; secured loans; term loans; real estate loans; credit investigations; the responsibilities of the bank lending officer.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking, Finance, or Management (8/76).

## Effective English

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1976—Present.

**Objective:** To enable the student to develop effectiveness in reading, writing, listening, and speaking, and the application of the fundamental principles of word usage, grammar, and style.

**Instruction:** Purposes of writing; organizing ideas; paragraphs; sentences; diction; choice of words; style; persuasion; business letters; review of grammar and usage; vocabulary; research papers.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration, Business Communication, or English (5/77).

## Effective Speaking

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1966—Present.

**Objective:** To enable the student to develop effective oral communication skills.

**Instruction:** The acquisition of basic skills and confidence needed to speak effectively; introduction to the behavioral principles underlying effective oral communications. The organization of content; building self-confidence and poise; the use of body and voice mechanisms as effective tools of thought communication. Instruction includes a weekly presentation by each student.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Business Communication (8/76).

## Financing Business Enterprises

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1967—Present.

**Objective:** To provide the student with an understanding of how to finance business enterprises.

**Instruction:** Description of how to organize and finance the operations of a business enterprise. Types of businesses (incorporated and unincorporated); capitalization of earnings; evaluating risk; equity capital, borrowed capital, and term capital; short-term credit; working capital and turnover ratios; cash flow and budgets; merger and consolidation; failure, reorganization, and bankruptcies.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking, Business Administration, Finance, or Management (8/76).

### Fundamentals of Bank Data Processing

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1968—Present.

**Objective:** To provide the student with the basic concepts of electronic data processing, with specific reference to bank automation.

**Instruction:** Survey of data processing and computer concepts; punched card data processing equipment and programming; data recording, storage, processing, input, and output; computer programming (flow charting and coding).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting, Business Administration, Electronic Data Processing, or Secretarial Science (8/76).

### Home Mortgage Lending

Refer to Real Estate Finance.

### Instalment Credit

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** August 1966—Present.

**Objective:** To provide the student with basic knowledge of instalment credit and its administration.

**Instruction:** Instalment credit; the techniques of instalment lending; establishing credit; obtaining and checking information; servicing the loan and collecting the amounts due; inventory financing; special loan programs; business development and advertising; the public relations aspect of instalment lending.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking or Finance (8/76).

### Law and Banking (Business Law)

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** August 1970—Present.

**Objective:** To provide the student with a basic knowledge of the concepts of business law.

**Instruction:** Introduction to law. Jurisprudence; the court system; contracts; property; torts; agencies; partnerships; corporations; sales of property; commercial paper; bank deposits. Emphasis is on the Uniform Commercial Code.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Law (8/76).

### Marketing for Bankers

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1975—Present.

**Objective:** To provide the student with an understanding and appreciation of the marketing function in banking.

**Instruction:** Concepts and philosophies of marketing; marketing information, research, and target; the marketing mix (product strategy, distribution strategy, advertising and sales promotion, personal selling, and pricing strategy); the methods of marketing planning.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Marketing (8/76).

### Money and Banking

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1975—Present.

**Objective:** To give the student a broad understanding of the function of the American financial system and the role of money and credit within the total economic system.

**Instruction:** Structure of the commercial banking system and other financial institutions; banks and the money supply; bank investments and loans; the Federal Reserve System; international monetary relations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Money and Banking (6/79).

### Principles of Bank Operations

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** August 1966—Present.

**Objective:** To provide the student with an understanding of the fundamentals of bank functions.

**Instruction:** Survey of bank functions and operations. Teller operations; savings and time deposits; bookkeeping operations; loans and investments; determination of service charges; legal relationships with depositors.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Banking, Business Administration, or Finance (8/76).

### Principles of Economics

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1977—Present.

**Objective:** To provide the student with knowledge of the theory and practical application of basic economic principles.

**Instruction:** Economics and economic systems; the market economy; costs and prices; types of product markets; managerial economics; wages; rent, interest, and profit; national income; the monetary system; the Federal Reserve System; savings institutions; government finance; the world economy and international economics.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Economics (5/77).

### Real Estate Finance

**(Formerly Home Mortgage Lending)**

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide the student with an overview of home mortgage investment by savings and commercial banks.

**Instruction:** An introduction to the home mortgage field; the mortgage market; the mortgage portfolio; appraisal; credit analysis; legal aspects; the processing and servicing of the mortgage.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking or Finance (8/76).

### Savings Bank Organization

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide the student with a broad knowledge of savings bank structure, functions, and the laws which pertain to and affect their operations.

**Instruction:** History of mutual savings banking; types of savings institutions; deposits, internal safeguards, and state supervision; organization and structure of the mutual savings banks; marketing; safe deposit, school savings, and new accounts departments; savings bank life insurance; payment problems; bank checks and money orders; Christmas clubs.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Banking, Business Administration, or Finance (8/76).

### Supervision and Personnel Administration (Supervisory Management)

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide the student with an understanding of the basic principles of supervision.

**Instruction:** Leadership; delegation; communication; motivation; training; employee interviewing; affirmative action plans; discipline; behavior correction; performance appraisal; position evaluation; conference leadership.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Supervision (8/76).

### Trust Functions and Services

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** August 1970—Present.

**Objective:** To provide the student with a basic and fundamental knowledge of the principles and policies underlying the various fiduciary services offered by financial institutions.

**Instruction:** Survey of all important services and functions of a trust department in a financial institution. Property and property rights; wills; settlement of estates; responsibilities of executors, administrators, and trustees; personal agencies; corporate agencies; employee trusts; pension trusts; community and institutional trusts and agencies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking or Business Law (8/76).

# AMERICAN INSTITUTE OF BANKING
# BUFFALO CHAPTER

The Buffalo Chapter of the American Institute of Banking (AIB) provides academic and professional courses in contemporary areas of banking activity for employees of 23 banking institutions in western New York. Day and evening instruction is provided.

The courses listed below constitute the majority of the offerings within the Chapter's Standard Certificate Program and the Graduate Study Program. These programs blend academic and technical banking curricula frequently not duplicated in collegiate or vocational institutions. Courses are offered in three major areas: Banking Functions, Management, and General Business. These courses are taught in classrooms provided by colleges located throughout the Buffalo area.

Please note that the credit recommendations listed below apply *only* to courses offered by the Buffalo Chapter of AIB.

Source of official student records: Educational Administrator, American Institute of Banking, 310 Marine Trust Building, 237 Main Street, Buffalo, New York 14203.

## Accounting I (ACC 110)

**Length:** 45 hours (15 weeks).

**Dates:** January 1965—Present.

**Objective:** To provide the student with an understanding of the fundamentals of accounting theory and practice.

**Instruction:** Fundamentals of accounting theory; accounting records; financial statements; banking procedures; reconciliations; special journals.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (2/75).

## Accounting II (ACC 111)

**Length:** 45 hours (15 weeks).

**Dates:** January 1965—Present.

**Objective:** To provide the student with an advanced understanding of the principles and practices of accounting.

**Instruction:** Continuation of Accounting I (ACC 110). Partnership and corporate organization; department accounting; inventory; fixed assests and depreciation; accrual bases of accounting and adjustment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (2/75).

## Agricultural Finance (FIN 232)

**(Formerly Agriculture Finance [FIN 532])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1969—December 1971.

**Objective:** To familiarize the student with the characteristics of agriculture as an industry and with the principles and practices used in the extension of credit to farmers.

**Instruction:** Livestock and poultry financing; crop financing; capital loans; agribusiness; management of the farm loan portfolio; business development; sources of agricultural information.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Agricultural Economics (1/75).

## Agriculture Finance (FIN 532)

Refer to Agricultural Finance (FIN 232).

## Analyzing Financial Statements (ACC 212)

**(Formerly Analyzing Financial Statements [ACC 112])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1965—Present.

**Objective:** To provide the student with an understanding of the characteristics of financial statements and procedures of analysis.

**Instruction:** The principles and policies involved in the appraisal of credit risks by analysis of accounting statements of financial condition. Concepts, characteristics, and tools of financial statements; financial statement analysis (ratio analysis, liquidity analysis, and earnings analysis); balance sheets and operating statements; tests used in appraising financial statements of various industries as a basis for credit.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting, Economics, or Finance (2/75).

## Bank Management by Objectives (MGT 304)

**(Formerly Bank Management by Objectives [MGT 504])**

**Length:** 20 hours (8 weeks).

**Dates:** January 1970—Present.

**Objective:** To provide the student with an understanding of the principles of management by objectives.

**Instruction:** Basic concepts of management by objectives using the case method approach. (Prerequisite: a course in management organization theory or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Business Administration or Management (2/75).

### Bank Public Relations and Marketing (BUS 226)

Refer to Marketing for Bankers (BUS 205).

### BankSim (MGT 312)

**(Formerly Management Policies for Commercial Banks [MGT 511])**

Refer to Management of Bank-Funds Bank Simulation (MGT 212).

### Business Communication by Letter and Memo (ENG 403)

**Length:** 45 hours (15 weeks).

**Dates:** January 1970—Present.

**Objective:** To enable the student to write professional letters and memos.

**Instruction:** Fundamental writing skills and principles as applied to modern business correspondence. Letters of refusal; credit refusals; sales letters; collection letters; business memos.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Communications (2/75).

### Business Financial Management (FIN 231)

**(Formerly Corporate Finance [FIN 531])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1973—Present.

**Objective:** To develop an understanding of the ways in which businesses finance their incorporation and continuing operations.

**Instruction:** The nature, functions, and management of the corporation; sources of financing; efficient utilization of funds by corporations; management of assets and liabilities; cost of capital; capital structure, present value, and capital budgeting; consideration of external economic forces that influence the corporation finance process. Emphasis on qualitative and quantitative tests as applied to corporate financial performance.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Finance (2/75).

### Business Math (BUS 122)

Refer to College Business Math (BUS 122).

### College Business Math (BUS 122)

**(Formerly Business Math [BUS 122])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1971—Present.

**Objective:** To provide the student with a background for the solution of business problems by mental and longhand computation.

**Instruction:** Basic application of mathematics to business problems. Personal banking records; inventory and turnover; charges for credit; sales activities and records; depreciation; discount and interest; promissory notes; interest variables; securities transactions. Workbook exercises are used with each lesson.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration (2/75).

### Commercial Banking (BNK 104)

**(Formerly Principles of Bank Operations Advanced [BNK 504 or 104])**

**Length:** 30 hours (15 weeks).

**Dates:** January 1973—Present.

**Objective:** To provide the beginning banker with a broad perspective of banking operations necessary for career development.

**Instruction:** Accelerated version of Principles of Bank Operations (BNK 101) designed for the management trainee. The economic importance of banks; the receiving function; bookkeeping operations; collection services; legal relations with depositors; negotiable instruments; savings and time deposit function; management of bank funds; internal controls; commercial bank services.

**Credit recommendation:** In the vocational certificate category, 2 semester hours in General Business (1/75).

### Commercial Lending (FIN 239)

**(Formerly Commercial Lending [FIN 539])**

Refer to Introduction to Commercial Lending (FIN 236).

### Commercial Lending I & II (FIN 237 & 238)

**(Formerly Lending I & II [FIN 536] and Practical Lending and Credit [FIN 536])**

**Length:** 36 hours (12 weeks).

**Dates:** February 1972—Present.

**Objective:** To present a case study approach to commercial loan analysis.

**Instruction:** Commercial loan principles and operations; credit and credit policy; analysis of financial statements; ratios and comparative analysis; analysis of the ability to generate cash.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper

division baccalaureate category, 2 semester hours in Finance (1/75).

### Corporate Finance (FIN 531)

Refer to Business Financial Management (FIN 231).

### Credit Administration (FIN 206)

**(Formerly Credit Administration [FIN 534])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1971—Present.

**Objective:** To provide the student with a basic understanding of credit administration.

**Instruction:** The principles of credit and loan administration. Working capital loans; secured loans; term loans; real estate loans; credit investigation; the responsibilities of the bank lending officer.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking, Finance, or Management (1/75).

### Effective English for Business Communication (ENG 401)

**Length:** 45 hours (15 weeks).

**Dates:** January 1970—Present.

**Objective:** To enable the student to develop effective communications skills.

**Instruction:** Development of skills necessary to master effective business communication. Correct grammatical usage; transactional analysis; mass communications; sales messages.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Communications (2/75).

### Effective Speaking (ENG 402)

**Length:** 45 hours (15 weeks).

**Dates:** January 1965—Present.

**Objective:** To enable the student to develop effective oral communication skills.

**Instruction:** The acquisition of basic skills and confidence needed to speak effectively; introduction to the behavioral principles underlying effective oral communications. The organization of content; building self-confidence and poise; the use of body and voice mechanisms as effective tools of thought communication. Instructor/group discussion and evaluation are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Communications or English (2/75).

### Fundamentals of Bank Data Processing (BUS 123)

**Length:** 45 hours (15 weeks).

**Dates:** January 1968—Present.

**Objective:** To provide the student with the basic concepts of electronic data processing with special reference to bank automation.

**Instruction:** Survey of data processing and computer concepts; punched card data processing equipment and programming; data recording, storage, processing, input, and output; computer programming (flowcharting and coding). A visit is made to a bank data processing center to observe the work flow and operation of punched card and computer equipment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electronic Data Processing (2/75).

### Fundamentals of Home Mortgage Lending (FIN 230)

**(Formerly Home Mortgage Lending [FIN 207 or 235])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1968—Present.

**Objective:** To provide the student with an overview of the home mortgage investment area of savings and commercial banks; to provide an understanding of the mortgage market and the operations of the mortgage department.

**Instruction:** An introduction to the mortgage field; the mortgage market; the mortgage portfolio; appraisal; credit analysis; legal aspects; the processing and servicing of the mortgage.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking or Finance (1/75).

### Home Mortgage Lending (FIN 207)

**(Formerly Home Mortgage Lending [FIN 235])**

Refer to Fundamentals of Home Mortgage Lending (FIN 230).

### Instalment Credit (FIN 236)

Refer to Introduction to Bank Lending (FIN 200).

### 1. Instalment Credit I (FIN 204)
### 2. Instalment Credit II (FIN 205)

**Length:** 1. 45 hours (15 weeks).
2. 45 hours (15 weeks).

**Dates:** September 1977—Present.

**Objective:** To provide the student with basic knowledge of instalment credit and its administration.

**Instruction:** Instalment credit; the techniques of instalment lending; establishing credit; obtaining and checking information; rate structure and yield analysis; servicing the loan and collecting amounts due; special loan programs; marketing instalment credit.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in

Banking or Finance (5/77). NOTE: Courses 1 and 2 must both be completed to receive credit.

### International Banking (ECO 243)

**Length:** 45 hours (15 weeks).

**Dates:** January 1969—Present.

**Objective:** To provide the student with an understanding of the fundamental concepts of international banking, the services performed by the international departments of commercial banks, and the operation of global credit.

**Instruction:** The world of international banking; organization and major operations of international departments of commercial banks; credit instruments; principles of international credit agencies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Economics or Finance (1/75).

### Introduction to Bank Lending (FIN 200)

**(Formerly Instalment Credit [FIN 236])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1968—December 1976.

**Objective:** To provide the student with basic knowledge of instalment credit and its administration.

**Instruction:** Instalment credit; the techniques of instalment lending; establishing credit; obtaining and checking information; servicing the loan and collecting the amounts due; inventory financing; special loan programs; business development and advertising; the public relations aspect of instalment lending.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking or Finance (1/75).

### Introduction to Bank Management (MGT 303)

**Length:** 45 hours (15 weeks).

**Dates:** January 1968—Present.

**Objective:** To provide the student with an understanding of the philosophy and organization of bank management and its place in society.

**Instruction:** Bank organization, operations, and management from the perspective of management. Planning; staffing; controlling; source and use of bank funds; the loan portfolio; the trust function; the bank industry in relation to regulatory agencies and society.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business Administration or Management (2/75).

### Introduction to Business (BUS 121)

Refer to Introduction to Economics and Business (ECO 140).

### Introduction to Commercial Lending (FIN 236)

**(Formerly Commercial Lending [FIN 239 or 539])**

**Length:** 30 hours (12 weeks).

**Dates:** October 1973—Present.

**Objective:** To teach the student management skills in the lending procedure.

**Instruction:** The loan interview; loan decisions and techniques; documentation for the credit file; problem loans; managing the loan portfolio. Course material is presented through workshops and case study problems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking, Finance, or Management (1/75).

### Introduction to Economics and Business (ECO 140)

**(Formerly Introduction to Business [BUS 121])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1970—Present.

**Objective:** To provide the student with an overview of business organizations in a free enterprise system.

**Instruction:** A general overview of the types and structures of business organizations; the marketing function; the legal and regulatory environment; business and society; personnel administration and labor relations; production and finance.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration (2/75).

### Law and Banking (BUS 124)

**Length:** 45 hours (15 weeks).

**Dates:** January 1971—Present.

**Objective:** To provide the student with the basic concepts of business law as applied to the banking industry.

**Instruction:** Introduction to law and the Uniform Commercial Code. Jurisprudence; the court system; contracts; property torts; agencies; partnerships; corporations; sales of property; commercial paper; bank deposits.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business Administration or Law (2/75).

### Lending I & II (FIN 536)

Refer to Commercial Lending I & II (FIN 237 & 238).

### Loans and Discount (FIN 203)

**(Formerly Loan and Discount [FIN 237])**

**Length:** 45 hours (15 weeks).

**Dates:** October 1974—Present.

**Objective:** To train bank personnel in the function performed by the discount (note) teller.

**Instruction:** Essential elements of the loan and discount function. Promissory notes; discounting commercial paper; guarantees; collateral agreements; notes secured by stocks, bonds, and savings accounts passbooks; the concepts of attachments perfection, priority, default, and foreclosure.

**Credit recommendation:** In the vocational certificate category, 3 semester hours in Banking (1/75).

### Management III Principles & Techniques Workshop (MGT 308)

**(Formerly Principles and Techniques of Management [MGT 308 or 506])**

**Length:** 16 hours (8 weeks).

**Dates:** January 1973—Present.

**Objective:** To provide the student with an understanding of management organization and theory in relation to techniques of setting performance standards and conducting the appraisal interview.

**Instruction:** Management theory in relation to writing position descriptions, setting standards of performance, and the performance appraisal interview. Course is designed around case problems, role playing, filmed case studies, and filmed and live lectures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Business Administration or Management (2/75).

### Management of Bank Funds—Bank Simulation (MGT 212)

**(Formerly BankSim [MGT 312] and Management Policies for Commercial Banks [MGT 511])**

**Length:** 48 hours (12 weeks).

**Dates:** January 1974—Present.

**Objective:** To provide the student with an understanding of the concepts, functions, and structure of the banking organization in relation to policy formulation.

**Instruction:** Determination of the function and structure of commercial banking. Risk; capital management; deposit and liquidity management; lending and investment function; auditing; personnel function; marketing and management of commercial bank funds. A computerized commercial bank management simulation game is part of the course.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business Administration or Management (2/75).

### Management Policies for Commercial Banks (MGT 511)

Refer to BankSim (MGT 312).

### Managerial Accounting (ACC 113)

**(Formerly Managerial Accounting [ACC 513])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1972—Present.

**Objective:** To provide the student with an understanding of the interpretation of accounting data in the planning and managing of business activities.

**Instruction:** Structure, concepts, and process of accounting; preparation, analysis, and use of financial statements; techniques for measuring assets, liabilities, equity, income, and expenses; use of accounting data for budgetary planning and control systems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting or Business Administration (2/75).

### Marketing for Bankers (BUS 205)

**(Formerly Bank Public Relations and Marketing [BUS 226])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1968—Present.

**Objective:** To provide the student with an understanding and appreciation of the public relations and marketing function in banking.

**Instruction:** The basics of internal and external bank public relations. Function and structure of bank public relations and marketing; staff; internal communications; publicity; advertising; marketing; selling; the officer call program; community relations; relations with competitors.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Marketing or Public Relations (1/75).

### Money and Banking (ECO 143)

**Length:** 45 hours (15 weeks).

**Dates:** January 1967—Present.

**Objective:** To provide the student with an understanding and appreciation of the function of money, credit, and the banking system in a modern economy.

**Instruction:** Basic monetary theory. Currency; the banking process; the Federal Reserve System; money and the national income; business cycles; monetary and fiscal policies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Economics (2/75).

### Negotiable Instruments (BUS 125)

**Length:** 45 hours (15 weeks).

**Dates:** September 1977—Present.

**Objective:** To provide an overview of the legal aspects of negotiable instruments used in the bank deposits, collection operations, and payment.

**Instruction:** Legal aspects of bank operations; commercial paper; check processing and collection; alternative payment mechanism. (Prerequisites: Principles of Bank Operations and Law and Banking, or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking (5/77).

### Practical Lending and Credit (FIN 536)

Refer to Commercial Lending I & II (FIN 237 & 238).

### Principles and Techniques of Management (MGT 308)

**(Formerly Principles and Techniques of Management [MGT 506])**

Refer to Management III Principles & Techniques Workshop (MGT 308).

### Principles of Bank Operations (BNK 101)

**Length:** 45 hours (15 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide the student with an understanding of the nature and purpose of the various functions of bank operations.

**Instruction:** Broad perspective of banking operations necessary for career planning and development. The economic importance of banks; bank services; the operations of a bank; government regulations.

**Credit recommendation:** In the vocational certificate category, 3 semester hours in General Business (1/75).

### Principles of Bank Operations Advanced (BNK 104)

**(Formerly Principles of Bank Operations Advanced [BNK 504])**

Refer to Commercial Banking (BNK 104).

### Principles of Economics I (Macro) (ECO 141)

**Length:** 45 hours (15 weeks).

**Dates:** January 1971—Present.

**Objective:** To provide the student with an understanding of economic principles necessary to develop an appreciation of modern fiscal and monetary problems.

**Instruction:** Principles of macroeconomic theory. The economic system; gross national product; employment and fiscal policy; money; banking; monetary policy.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Economics (2/75).

### Principles of Economics II (Micro) (ECO 142)

**Length:** 45 hours (15 weeks).

**Dates:** January 1975—Present.

**Objective:** To provide the student with a more detailed knowledge of economics with emphasis on smaller units within the economic system.

**Instruction:** Principles of microeconomics. Supply and demand; determination of output and prices; current American economic problems; introduction to international economics (determination of currency, rates of exchange, and comparisons among systems).

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Economics (2/75).

### Principles of Real Estate (FIN 540)

Refer to Real Estate Finance (FIN 240).

### Principles of Real Estate Appraisal (FIN 241)

**(Formerly Principles of Real Estate Appraisal [FIN 541])**

Refer to Real Estate Appraisal (FIN 241).

### Principles of Savings Bank Operations (BNK 102)

**Length:** 45 hours (15 weeks)

**Dates:** January 1970—Present.

**Objective:** To provide savings bank employees with an overview of the functions and operations of savings banks.

**Instruction:** Fundamental savings bank operations. The economic function; differences among financial institutions; role of the savings bank; organization and structure.

**Credit recommendation:** In the vocational certificate category, 3 semester hours in General Business (1/75).

## Principles of Supervision and Management (MGT 302)

**(Formerly Supervision and Personnel Administration [MGT 302])**

**Length:** 45 hours (15 weeks).

**Dates:** January 1965—Present.

**Objective:** To provide the student with an understanding of the basic principles of supervision and administration.

**Instruction:** Organizational structure; human relations aspects of the supervisory role; communications; recruitment and selection; orientation of the new employee; training and development; motivation; handling of grievance procedures; reports; salary administration and operation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business Administration or Management (2/75).

## Real Estate Appraisal (FIN 241)

**(Formerly Principles of Real Estate Appraisal [FIN 241 or 541])**

**Length:** 30 hours (15 weeks).

**Dates:** January 1974—Present.

**Objective:** To provide the student with basic knowledge of real estate valuation.

**Instruction:** Introduction to real estate appraising. Cost, market, and income approaches to value; preparing the appraisal report.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Administration (2/75).

## Real Estate Finance (FIN 240)

**(Formerly Principles of Real Estate [FIN 540])**

**Length:** 30 hours (15 weeks).

**Dates:** January 1973—Present.

**Objective:** To provide the student with a sound foundation in real estate theories and practices.

**Instruction:** Introduction to real estate theories and practices. The real estate market; contracts; property ownership; financing; brokerage; valuation; government operations and urban development.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Administration (2/75).

## Savings and Time Deposit Banking (BNK 201)

**Length:** 45 hours (15 weeks).

**Dates:** January 1968—Present.

**Objective:** To introduce the student to the significance of savings and time deposits in the financial field.

**Instruction:** The savings function and its relationship to the economy. The various forms of savings; the impact of interest rates; the role of savings institutions; asset management policies; regulatory agencies; current problems and issues.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Finance (1/75).

## Savings Bank Life Insurance (BNK 208)

**(Formerly Savings Bank Life Insurance [BNK 506])**

**Length:** 16 hours (8 weeks).

**Dates:** October 1971—Present.

**Objective:** To prepare students for the New York State Life Insurance Examination necessary to be licensed; to provide the student with a fundamental understanding of the life insurance industry.

**Instruction:** Principles of life insurance. Types of life insurance; policy contracts; nonforfeiture; settlement options; legal aspects; types of insurance plans; the need for qualified advice.

**Credit recommendation:** In the vocational certificate category, 1 semester hour in Insurance (1/75).

## Supervision and Personnel Administration (MGT 302)

Refer to Principles of Supervision and Management (MGT 302).

## Trust Functions and Services (BNK 206)

**(Formerly Trust Functions and Services [BNK 503])**

**Length:** 30 hours (15 weeks).

**Dates:** January 1971—Present.

**Objective:** To provide the student with an understanding of the services rendered by institutions engaged in the trust business; to provide an introduction to the functions and services of a corporate fiduciary.

**Instruction:** Historical background of trust services and institutions; government supervision; specific service functions (property, wills, estates, employee trust, pension trust, institutional trust).

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Banking or Business Law (1/75).

# AMERICAN INSTITUTE OF BANKING
# NASSAU COUNTY CHAPTER

The Nassau County Chapter of the American Institute of Banking (AIB) provides academic and professional courses in banking for employees of 57 banking institutions in Nassau County.

The courses listed below constitute offerings within the Chapter's Basic, Standard, and Advanced Certificate programs. These programs combine academic and technical banking curricula frequently not duplicated in collegiate or vocational institutions. Courses are offered in three major areas: Foundations of Banking, Banking Functions, and Management and Supervision. These courses are taught in evening sessions in classrooms at Hofstra University.

Please note that the credit recommendations listed below apply *only* to courses offered by Nassau County Chapter of AIB.

Source of official student records: Educational Director, American Institute of Banking, P.O. Box 156, Garden City, New York 11530.

### Accounting: Principles and Applications, Part One

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide basic knowledge in accounting principles and procedures.

**Instruction:** Analysis of transactions; the accounting cycle; special journals and ledgers; end-of-cycle procedures; payroll and control systems; payables and receivables; valuation of other assets; taxes; completion of accounting cycle.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting (9/75).

### Accounting: Principles and Applications, Part Two

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide advanced knowledge of accounting principles and procedures.

**Instruction:** Continuation of Accounting: Principles and Applications, Part One. Departmental accounting; partnership accounting cycle; branch and home office accounting; corporate accounting; manufacturing and cost accounting; budgeting, reporting, and statement analysis; review of basic concepts. (Prerequisite: Accounting: Principles and Applications, Part One.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting (9/75).

### Analyzing Financial Statements

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1966—Present.

**Objective:** To provide the student with an understanding of the characteristics of financial statements and procedures of analysis.

**Instruction:** The principles and policies involved in the appraisal of credit risks by analysis of accounting statements of financial condition. Concepts, characteristics, and tools of financial statements; financial statement analysis (ratio analysis, liquidity analysis, and earnings analysis); balance sheets and operating statements; tests used in appraising financial statements of various industries as a basis for credit. (Prerequisite: Accounting: Principles and Applications, Part One.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Banking or Finance (5/76).

### Bank Letters and Reports

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1966—Present.

**Objective:** To improve the quality of business writing with emphasis on bank correspondence.

**Instruction:** Fundamental language skills and principles underlying modern correspondence, with application to bank letters, memos, and reports. Considerable practice in writing is followed by critical analysis.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Communications (5/76).

### Bank Management

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide a working knowledge of the new aspects of bank management.

**Instruction:** Nature and objectives of banking; formulation of objectives and policies; organizational

33

planning; staffing of the organizational structure; management controls; the deposit function; employment of bank funds; the loan function; the bank investment account; the trust function and other service functions; current banking issues; the art of management. Case studies in bank management are used.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking or Finance (9/75).

## Business Mathematics

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1966—Present.

**Objective:** To provide knowledge of the fundamentals of business mathematics.

**Instruction:** Arithmetic tools; business documents; payrolls; statistical data and graphs; depreciation; simple interest; time value of money; mathematics of compounding.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Mathematics (9/75).

## Credit Administration

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide the student with knowledge of the factors influencing and determining loan policy.

**Instruction:** Practice and principles of credit administration; methods of credit investigation and analysis; credit techniques; specific credit problems; regular and unusual types of loans.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (9/75).

## Data Processing

**(Formerly Fundamentals of Bank Data Processing)**

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1966—Present.

**Objective:** To provide the student with the basic concepts of electronic data processing with special reference to bank automation.

**Instruction:** Survey of data processing and computer concepts as applied to banks; punched card data processing equipment and programming; data recording, storage, processing, input, and output; computer programming (flowcharting and coding). A visit is made to a bank data processing center to observe the work flow and operation of punched card and computer equipment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Data Processing or Electronic Data Processing (5/76).

## Economics

**(Formerly Principles of Economics)**

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide background in principles of macroeconomics.

**Instruction:** Overview of economic institutions; basic principles of market pricing; discussion of managerial economics; national income; monetary policy; economics as a social science.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Economics (9/75).

## Effective Speaking

Refer to Speech/Communication.

## Fundamentals of Bank Data Processing

Refer to Data Processing.

## Home Mortgage Lending

Refer to Real Estate Finance.

## Instalment Credit

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide an introduction to instalment credit and its administration.

**Instruction:** Techniques of instalment lending (establishing the credit, obtaining and checking information, servicing the loan, and collecting amounts due); discussion of inventory financing, special loan programs, business development and advertising, and the public relations aspect of instalment lending.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (9/75).

## Law and Banking

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1966—Present.

**Objective:** To provide the student with the basic concepts of business law as applied to the banking industry.

**Instruction:** Introduction to the rules of law which underlie banking. Jurisprudence; the court system and civil procedure; contracts; quasi-contracts; property; torts and crimes; agencies; partnerships; corporations; sales of property; commercial paper; bank deposits and collections; documents of title; secured transactions. Emphasis is on the Uniform Commercial Code.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Business Law (5/76).

### Marketing for Bankers

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1970—Present.

**Objective:** To broaden the student's concepts of marketing, its philosophy and framework, especially as they pertain to banking.

**Instruction:** Fundamental concepts and philosophy of marketing; marketing information and research; product distribution, promotion, and pricing strategies; market planning.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in General Business or Marketing (5/76).

### Money and Banking

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide basic background to the practical aspects of money and banking, with emphasis on basic monetary theory.

**Instruction:** Economic stabilization; types of spending; the role of gold; limitations of central bank control; government fiscal policy; balance of payments; foreign echange; the effect of the above on the yield curve and the structuring of portfolios.

**Credit recommendstion:** In the upper division baccalaureate category, 3 semester hours in Money and Banking (9/75).

### Principles of Bank Operations

Refer to Principles of Banking.

### Principles of Banking

**(Formerly Principles of Bank Operations)**

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide new bank employees with an understanding of the fundamentals of bank operations.

**Instruction:** Survey of bank functions and operations. Teller operations; savings and time deposits; bookkeeping operations; loans and investments; determination of service charges; legal relationships with depositors.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking, Business Administration, Economics, or Finance (9/75).

### Principles of Economics

Refer to Economics.

### Psychology

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1975—Present.

**Objective:** To provide an introduction to the principles of psychology.

**Instruction:** Examination of the various stages of human growth, including the study of learning, perception, personality development, and motivation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Psychology (5/76).

### Real Estate Finance

**(Formerly Home Mortgage Lending)**

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1966—Present.

**Objective:** To provide the student with an understanding of the home mortgage investment area of savings and commercial banks.

**Instruction:** The mortgage market; acquisition of a mortgage portfolio; mortgage plans and procedures; mortgage loan processing and servicing; overall portfolio management. The course is presented from the viewpoint of the mortgage loan officer.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Banking or Finance (5/76).

### Savings Bank Organization

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** January 1966—Present.

**Objective:** To provide savings bank employees with an overview of mutual savings banking.

**Instruction:** History and purpose of savings banks; the trustee concept; departmental operations; rules and regulations of the banking department and the Federal Deposit Insurance Corporation; new accounts, savings department, and safe deposit operations (teller's work, payment problems, on-line computer accounting, payment of interest, and safe deposit rules); auditing and accounting operations; mortgage department; investment department.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper

division baccalaureate category, 2 semester hours in Banking, Business Administration, Economics, or Finance (9/75).

## Speech/Communication

**(Formerly Effective Speaking)**

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1966—Present.

**Objective:** To enable the student to develop effective oral communication skills.

**Instruction:** The acquisition of basic skills and confidence needed to speak effectively; introduction to the behavorial principles underlying effective oral communications. The organization of content; building self-confidence and poise; the use of body and voice mechanisms as effective tools of thought communication. Instructor/group discussion and evaluation are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Communication or Speech (5/76).

## Supervision

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1969—Present.

**Objective:** To provide the student with an understanding of the basic principles of supervision and administration.

**Instruction:** Organizational structure; human relations aspects of the supervisory role; communications; recruitment and selection; orientation of the new employee; training and development; motivation; handling of grievance procedures; reports; salary administration and operation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business Administration or Management (5/76).

## Trust Functions and Services

**Location:** Hofstra University, Hempstead, NY.

**Length:** 45 hours (14 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide the student with an understanding of the services rendered by institutions engaged in the trust business; to provide an introduction to the functions and services of a corporate fiduciary.

**Instruction:** Historical background of trust services and institutions; government supervision; specific service functions (property, wills, estates, employee trust, pension trust, institutional trust).

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Banking, Business Law, or Finance (5/76).

# AMERICAN INSTITUTE OF BANKING NEW YORK CITY CHAPTER

The New York City Chapter of the American Institute of Banking (AIB) provides academic and professional courses and programs for an adult population composed of employees of approximately 260 banking institutions in the New York City metropolitan area. Day and evening instruction is provided in contemporary areas of banking activity.

The courses listed below constitute the Chapter's School of Banking Program, which combines academic and technical banking curricula frequently not duplicated in collegiate or vocational institutions. Four specialized areas of study designed for those seeking broad professional banking career development are offered: Commercial, Savings, International Banking, and Banking Operations. Courses are taught in the AIB classrooms located at 225 Broadway in New York City, and in facilities provided by banks in the city.

Please note that the credit recommendations apply *only* to courses offered by the New York City Chapter of AIB.

Source of official student records: Office of the Registrar, American Institute of Banking, 225 Broadway, New York, New York 10007.

## Accounting Principles I

**(Formerly Accounting Principles)**

**Length: Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates: Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective: Version 1:** To provide the student with a basic understanding of accounting terminology, concepts, and practices, especially in reference to basic financial documents of business and banking. **Version 2:** To provide the student with a basic understanding of accounting terminology, concepts, and practices, with particular emphasis on managerial uses of financial data within the framework of business and banking.

**Instruction: Version 1:** Fundamentals of accounting theory and practice. Theory of debit and credit; classification of accounts; principles underlying accounting records; business papers and documents used as the basis of original entry; preparation of balance sheets and income statements; principles and problems of controlling accounts of individual proprietorships and partnerships. Laboratory assistants aid students in completing homework assignments. **Version 2:** Fundamentals of accounting theory and practice: the accounting cycle; basic accounting records; the trial balance and worksheet; closing of books for the period; maintenance and functions of ledgers and journals; valuation of inventory and property; plant and equipment; accruals and deferrals; preparation of balance sheets and income statements. Laboratory assistants aid students in completing assignments.

**Credit recommendation: Version 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Accounting or Finance (5/74). **Version 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting or Finance (5/81).

## Accounting Principles II

**Length:** 40 hours (15 weeks).

**Dates:** September 1981—Present.

**Objective:** To provide the student with an understanding of corporate accounting principles and managerial uses of accounting data.

**Instruction:** Fundamentals of corporate accounting theory and practice: generally accepted accounting principles and financial reporting standards; business taxes; incorporation; capital stock transactions; bonds and other long-term liabilities; corporate earnings and capital transactions; statement analysis—revenue and expenses; analyzing the flow of funds; internal reports for management; automated accounting systems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Accounting or Finance (5/81).

## Bank Accounting

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To provide the student with basic knowledge of the series of accounting controls that are used for effective internal management of a commercial bank.

**Instruction:** Principles of accounting as applied to specific functional organizational and operational situations in a commercial bank; effect of accounting requirements on the operating system of a bank; impact of new technology on traditional accounting procedures; bank income and expense accounting; bank costs and the development of internal controls in the accounting routines of a bank.

42

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Accounting (5/74).

### Bank Audit and Internal Controls

Refer to Bank Internal Control and Audit.

### Bank Data Processing Fundamentals

**Length:** 30 hours (15 weeks).

**Dates:** September 1967—July 1981.

**Objective:** To provide the student with basic knowledge of data processing concepts and applications of the computer, with specific reference to the role of automation in banks.

**Instruction:** Survey of data processing concepts; punched card data processing equipment and programming; computer concepts (data recording, storage, processing, input and output); computer programming (flow charting and coding). A visit to a bank data processing center is made to observe the work flow and operation of punched card and computer equipment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electronic Data Processing (5/74).

### Bank Internal Control and Audit

**(Formerly Bank Audit and Internal Controls)**

**Length:** **Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates:** **Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective:** **Version 1:** To provide the student with an understanding of good audit practices in effective bank management. **Version 2:** To provide the student with an understanding of effective audit practices in bank management.

**Instruction:** **Version 1:** Organizing a bank for maximum protection; commercial bank and savings bank internal control and auditing procedures; bank frauds (both nonconcealed and concealed); EDP auditing and internal controls. Case studies of fraud and its detection are utilized. **Version 2:** Methods of organizing a bank for maximum protection: internal control and auditing procedures for commercial and savings institutions, and EDP auditing. Case studies of bank fraud and its detection.

**Credit recommendation:** **Version 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Accounting (5/74). **Version 2:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Accounting (5/81).

### Basic Marketing

**Length:** 40 hours (15 weeks).

**Dates:** September 1981—Present.

**Objective:** To provide the student with an understanding of the basic concepts and principles that affect the marketing of financial and nonfinancial banking services.

**Instruction:** Basic marketing concepts; consumer behavior; techniques of market research, product forecasting, and planning; distribution, promotion, and pricing strategy within the field of banking.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business Administration or Marketing (5/81).

### Business Conference Speech

**Length:** 30 hours (15 weeks).

**Dates:** September 1968—July 1981.

**Objective:** To provide the student with the opportunity to develop effective business communication skills.

**Instruction:** The acquisition of basic skills and confidence needed to speak effectively; introduction to the behavioral principles underlying effective oral communications. The organization of content; building self-confidence and poise; the use of body and voice mechanisms as effective tools of thought communication. Instructor/group discussion and evaluation are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Communications or Speech (5/74).

### Business Law

**Length:** 40 hours (15 weeks).

**Dates:** September 1981—Present.

**Objective:** To provide the student with an understanding of the basic concepts of contract law and the law of commercial paper.

**Instruction:** Introduction to the function of contract law, and the elements essential to the creation, performance, and discharge of contracts. Detailed coverage of the laws regarding checks, drafts, and promissory notes. Using case materials and Article 3 of the Uniform Commercial Code, the course emphasizes such areas as negotiability, assignment, forgery, alteration, certification, and holder in due course. Also addresses negotiable instruments as they are processed from deposit to payment, with emphasis on Article 4 of the Uniform Commercial Code, concerning stop payments, missing endorsements, presentment, and dishonor and settlement.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Law (5/81).

### Business Mathematics

**Length:** 27 hours (14 weeks).

**Dates:** September 1981—Present.

**Objective:** To provide the student with skills in business mathematics.

**Instruction:** Application of basic mathematics to inventory and turnover, credit charges, sales activities and records, depreciation, discount and interest variables, negotiable instruments, and securities transactions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Mathematics (5/81).

### Business Psychology

**Length:** 30 hours (15 weeks).

**Dates:** September 1969—July 1981.

**Objective:** To provide the student with an understanding of the role of self, other workers, and work groups in a labor-intensive white collar industry such as banking.

**Instruction:** General orientation to the field of psychology as applied to business. Self-improvement and work efficiency; human relationships; motivation; leadership; employee counseling; training; and individual mental health.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Applied Behavioral Sciences (5/74).

### Business Writing

**Length:** **Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates:** **Version 1:** September 1972—August 1981.
**Version 2:** September 1981—Present.

**Objective:** To provide the student with skill in writing, with specific emphasis given to business letters, memoranda, and reports.

**Instruction: Versions 1 and 2:** Continuation of the English course listed below. Focuses on the mastery of writing skills within the context of well-planned business letters, memoranda, and reports. Regular written exercises are employed to develop the logical, concise, and orderly habits required for business writing. **Version 2:** Topics are treated in greater depth.

**Credit recommendation: Version 1:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Communication (5/74). **Version 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Communication (5/81).

### College Mathematics for Business

**Length:** 30 hours (15 weeks).

**Dates:** September 1969—July 1981.

**Objective:** To provide the student with skills in business arithmetic and accounting terminology and concepts in preparation for the course in Accounting Principles.

**Instruction:** Basic application of mathematics examined to develop a working knowledge of personal banking records; inventory and turnover; charges for credit; sales activities and records; depreciation; discount and interest; promissory notes; interest variables; securities transactions. Workbook problems are used with each lesson.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Mathematics (5/74).

### Commercial Banking Principles

Refer to Principles of Banking.

### Commercial Letters of Credit

**Length:** 30 hours (15 weeks).

**Dates:** September 1969—July 1981.

**Objective:** To provide the student with knowledge of the use of the commercial letter of credit in international banking and metropolitan banking.

**Instruction:** Comprehensive view of letters of credit, their purposes, functions, and methods of operation as currently handled in the international departments of banks; import credit; export credit; government credits; refinancing and acceptances. The topic is approached in the framework of the day-to-day processing of letters of credit by banks.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking, Business Administration, Economics, or Finance (5/74).

### Computer Applications and Information Systems

**Length:** 40 hours (15 weeks).

**Dates:** September 1981—Present.

**Objective:** To provide the student with a fundamental knowledge of computer equipment, programming languages, and banking applications, especially those related to demand deposit, savings, loan, and trust accounting services.

**Instruction:** Essential elements of a computer system, including input and output stations, central processing units, and prime and auxiliary storage; components of telecommunication capability, including transmission paths, terminal devices, and the elements of networking; functional aspects of systems and application software, flow charting, and programming languages.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Computer Science (5/81).

## Consumer Credit

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To introduce the student to marketing concepts and to develop a critical knowledge of consumer credit practices in general and in New York City specifically.

**Instruction:** History, techniques, operating costs, and present competitive position of each of the principal types of consumer credit institutions; personal loan departments of banks, loan companies, credit unions; qualification of a good credit risk; techniques of loan interviews and the development of credit information; investigation and the credit decision; collection procedures; business development.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Finance or Money and Banking (5/74).

## Consumer Credit: Behavior and Practice

**Length:** 40 hours (15 weeks).

**Dates:** September 1981—Present.

**Objective:** To develop in the student a critical knowledge of consumer behavior and consumer credit.

**Instruction:** An introduction to the basic concepts of contemporary consumer behavior and its application to the work of credit institutions. The course examines credit instruments, decision making, and collection procedures.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business Administration, Finance, or Marketing (5/81).

## Corporate Trust Administration

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—June 1979.

**Objective:** To provide the student with practical and conceptual knowledge of the functions, responsibilities, and operations of current corporate trust banking activities.

**Instruction:** Review of corporate financial principles and practice; use of capital financing instruments; establishment of corporate trusts and issuance of bonds; administration of corporate trusts, before and after default; corporate agency appointments, other than transfer agent and registrar; bond operation practices and procedures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Finance or Money and Banking (5/74).

## Corporation Accounting Principles

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To provide students with an understanding of corporation accounting principles in preparation for required courses in specialized areas of study.

**Instruction:** Fundamentals of accounting theory and practice of the corporation, especially industrial and commercial. Problems of opening, adjusting, and closing corporate books; capital stock; corporate earnings; investments; bonds; notes; appropriation of retained earnings. Consideration of other stockholders' equity accounts and transactions, of organization for control, and interpretation from the management viewpoint.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Accounting or Finance (5/74).

## Corporation Finance

**Length:** **Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates:** **Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective:** **Version 1:** To develop in the student a comprehensive understanding of the ways in which business corporations finance their incorporation and continuing daily operations. **Version 2:** To develop in the student a working knowledge of measuring, acquiring, and managing corporate funds, with particular attention placed on current events in the capital markets.

**Instruction:** **Version 1:** The nature, functions, and management of the corporation; sources of financing; efficient utilization of funds by corporations; management of assets and liabilities; cost of capital; capital structure, present value, and capital budgeting; consideration of external economic forces that influence the corporation finance process. Emphasis on qualitative and quantitative tests as applied to corporate financial performance. **Version 2:** Comprehensive analysis of corporate cash flow, budgets, and controls; review of the capital markets in the United States; issuances of short-, intermediate-, and long-term securities to finance capital requirements; discussion of private placements, leasings, mergers, acquisitions, reorganizations, and bankruptcies; detailed review of the functions and responsibilities of the chief financial officer and the investment banker.

**Credit recommendation:** **Version 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Finance (5/74). **Version 2:** In the upper division baccalaureate category, 3 semester hours in Finance (5/81).

## Credit Administration

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To provide the student with an understanding of the fundamentals of credit and loan administration.

**Instruction:** Study of the credit and loan function in the context of overall banking operations. Lending types and techniques; methods of credit investigation; sources of credit information; credit techniques; credit correspondence; types of bank loans.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Banking or Finance (5/74).

## Credit and Financial Statement Analysis

**Length:** 40 hours (15 weeks).

**Dates:** September 1981—Present.

**Objective:** To provide the student with a basic understanding of the fundamentals of credit and loan administration, as well as the functions and techniques of corporate credit analysis according to the standards and practices of New York City banks.

**Instruction:** An intensive review of the credit and loan function, lending forms and techniques, and methods and sources of credit information. Principles and policies of credit appraisal; analysis of financial statements using ratios, liquidity, and earnings analysis; items on the typical balance sheet and operating statement; tests normally applied in appraising the financial statements of various industries as a basis for credit.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking, Business Administration, or Finance (5/81).

## Economic Principles

**Length:** **Version 1:** 60 hours (30 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates:** **Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective:** To provide the student with a basic knowledge of economic principles.

**Instruction:** **Version 1:** A two-semester survey of the major principles, institutions, and problems of our economic system today. The first semester covers macroeconomics and the second semester covers microeconomics. Particular emphasis given to the development of economic institutions, national income analysis, comparative economics, economics of the marketplace, and present-day economic problems as forces in understanding the economic system; additional focus on the operation of the international economy. **Version 2:** Survey of the major concepts and themes that apply to the economic system today. Principles underlying both consumer decisions and business decisions. Emphasis on national income analysis, measurement of economic activity, stabilization, fiscal and monetary policy, banking, inflation, and unemployment.

**Credit recommendation:** **Version 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Economics (5/74). **Version 2:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Economics (5/81).

## Employee Benefit Trust Administration

**Length:** 30 hours (15 weeks).

**Dates:** September 1973—July 1981.

**Objective:** To provide the student with knowledge of the procedures and regulations relating to the various employee benefit trusts.

**Instruction:** Detailed coverage of the various aspects of employee benefit trusts. The establishment of pensions; profit sharing; thrift and savings plans; stock bonus trusts; trusts for self-employed (HR-10); procedures for establishing and regulating such trusts; trends in employee benefit plans; the duties and powers of trustees; role of the actuary; employee benefit trust investment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Finance or Money and Banking (5/74).

## English

**Length:** **Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates:** **Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective:** To develop the student's skill in comprehension and the use of grammatical concepts; to assist the student in developing themes that clearly and accurately express his or her intention.

**Instruction:** **Versions 1 and 2:** Initial diagnostic testing of students identifies specific problem areas (usually grammar, usage, spelling, vocabulary, punctuation) and determines the amount of attention to be devoted to each topic. Techniques of organizing paragraphs and themes and of effective presentation are developed. Writing samples indicate degree of progress throughout the course. **Version 2:** Topics are treated in greater depth.

**Credit recommendation:** **Version 1:** In the lower division baccalaureate/associate degree category, 2 semester hours in English (5/74). **Version 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in English (5/81).

## Estate and Trust Administration

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To provide the student with knowledge of the basic elements of estate administration and the fundamental concepts of personal trusts and their administration.

**Instruction:** Intestacies, wills, and probates of wills; marshaling of assets; payments of debts; claims and legacies; distribution of assets; accountability of executors and administrators; creation of trusts; duties, powers, and limitations of fiduciaries; powers of appointment; termination of trusts; common trust funds.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Finance or Money and Banking (5/74).

### Financial Statement Analysis

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To develop in the student fundamental knowledge of corporate credit analysis according to the standards and practices of New York City banks.

**Instruction:** The principles and policies involved in the appraisal of credit risks by analysis of accounting statements of financial condition. Concepts, characteristics, and tools of financial statements; financial statement analysis (ratio analysis, liquidity analysis, and earnings analysis); balance sheets and operating statements; tests used in appraising the financial statements of various industries as a basis for credit.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking or Finance (5/74).

### Financing International Trade

**Length:** 40 hours (15 weeks).

**Dates:** September 1981—Present.

**Objective:** To provide the student with a theoretical and practical knowledge of the economic and financial aspects of international trade.

**Instruction:** Balance of payments; foreign exchange markets; environmental aspects of international trade; major documents in international trade.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking, Business Administration, Economics, or Finance (5/81).

### Foreign Exchange Theory and Practice

**Length: Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates: Version 1:** September 1969—August 1981.
**Version 2:** September 1981—Present.

**Objective: Version 1:** To familiarize the student with the workings of the world's various foreign exchange systems and the fundamental workings of the foreign exchange market as related to the daily operations of the foreign exchange department of a money center bank. **Version 2:** To provide the student with a working knowledge of the foreign exchange market and Eurocurrency market as related to the daily operations of the foreign exchange department of a money center bank.

**Instruction: Version 1:** Organization of the foreign exchange market (hedging, interest arbitrage, and the method of dealing with the exchange problems confronting the bank's client); functions and organization of foreign exchange accounting. **Version 2:** Comprehensive view of the foreign exchange market including dealing techniques of a bank's trading room and its corporate customers. Spot trading; hedging; covered interest arbitrage; swap transactions. Interaction between the foreign exchange market and the Euromarket. Policy matters and accounting for foreign exchange transactions.

**Credit recommendation: Version 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking, Business Administration, Economics, or Finance (5/74). **Version 2:** In the upper division baccalaureate category, 3 semester hours in Banking, Business Administration, Economics, or Finance (5/81).

### Human Relations in Bank Work

**Length:** 30 hours (15 weeks).

**Dates:** September 1969—July 1981.

**Objective:** To provide the student with an understanding of the various organizational factors and procedures that determine career growth and progress in banking.

**Instruction:** Growth and history of the human relations concept; the supervisor's job; leadership and its effects on employees; motivation and job advancement; training new employees; self-development and development of others; problem solving.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Applied Behavioral Science (5/74).

### Human Relations in Banking (Human Relations and Organizational Behavior)

**Length:** 40 hours (15 weeks).

**Dates:** September 1981—Present.

**Objective:** To provide the student with an understanding of interpersonal relationships within an organizational structure.

**Instruction:** Examines the evolution of human relations in the work setting, including motivation, leadership, communication, personality theories, and the dynamics of group behavior.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business Administration or Management (5/81).

## International Banking Operations

**Length:** **Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates:** **Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective:** To provide the student with an introduction to international banking.

**Instruction:** **Version 1:** Basic survey dealing with the evolution of international banking in the United States, the instruments and documents used in foreign trade, and the various functions of an international banking department. **Version 2:** Basic survey of the role of international banking in world trade and the place and function of the international division in United States banks. Discussion of the correspondent bank relationships: payment and communications systems mechanisms; the Eurodollar market and international lending agencies; presentation of the documents of international trade and the operation of the noncredit products facilitating that trade.

**Credit recommendation:** **Version 1:** In the lower division baccalaureate/ associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking, Business Administration, Economics, or Finance (5/74). **Version 2:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking, Business Administration, Economics, or Finance (5/81).

## International Collections and Money Transfer

**Length:** 30 hours (15 weeks).

**Dates:** September 1969—July 1981.

**Objective:** To provide the student with basic knowledge of NOSTRO and VOSTRO accounts as used in international banking operations.

**Instruction:** Detailed coverage of the NOSTRO and VOSTRO bookkeeping functions; the funds transfer systems for both domestic and international money transfers; methods of handling documentary collections (inward and outward) and means of financing these collections.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking, Business Administration, Economics, or Finance (5/74).

## Investment Principles

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To develop in the student objective and systematic knowledge of the forces, factors, and technical requirements utilized in formulating sound investment decisions.

**Instruction:** Selection of particular types of investments on the basis of needs, purposes, and financial status of each class of investor; mechanics of investment for each investor class; study of recognized quantitative and qualitative tests used in judging security values; legal and financial characteristics of various types of investment securities; daily economic and social forces that necessitate a continuing flexible approach in making investment decisions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Finance (5/74).

## Law of Commercial Instruments

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To provide the student with basic knowledge of the codified law in Articles 3 and 4, Uniform Commercial Code, with reference to the processing and collection responsibilities of financial institutions with commercial instruments.

**Instruction:** The rights and duties of parties to money instruments (checks, drafts, notes, and certificates of deposit) under Article 3 of the Uniform Commercial Code; the problems of financial institutions in the handling of commercial instruments in the collection process under Article 4 of the Uniform Commercial Code.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Law or Money and Banking (5/74).

## Law of Contracts

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To provide the student with basic knowledge of the concepts and fundamentals of contractual relationships that are necessary to function effectively in a business environment.

**Instruction:** Introduction to the court system; development of legal systems and sources of law; function of contract law; elements essential to the creation, performance, and discharge of contracts.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Administration or Law (5/74).

## Life Insurance

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To provide the student with a basic understanding of life insurance.

**Instruction:** Life insurance principles, structure, and practice as required of company agents and representatives by the New York State Insurance Department. Selection of risks; values and benefits; various types of policies; terms of life insurance contract; sales features; life insurance as an investment; planned settlement of the life insurance estate.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Administration, Economics, Finance, or Life Insurance Principles (5/74).

## Management Practice

**Length:** 30 hours (15 weeks).

**Dates:** September 1969—July 1981.

**Objective:** To provide the student with an understanding of the role and responsibilities of the manager of the work forces in financial institutions.

**Instruction:** Managerial organization, planning, and controlling, especially for first-level and middle-manager positions; job management; improvement of management methods; developing and maintaining the work team. Problem solving via case study is emphasized.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Management (5/74).

## Management Theory and Practice

**Length:** 40 hours (15 weeks).

**Dates:** September 1981—Present.

**Objective:** To provide the student with an understanding of the principles of modern management with applications to financial institutions.

**Instruction:** Critical aspects of modern management practice, especially the functions of planning, organizing, and controlling; structures and types of organizations; interaction and interdependency of the organization and the community.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business Administration or Management (5/81).

## Marketing

**Length:** 30 hours (15 weeks).

**Dates:** September 1969—July 1981.

**Objective:** To provide the student with an understanding of new bank marketing strategies, as well as how each employee is a key factor in influencing various banking market approaches.

**Instruction:** Marketing concepts and marketing management responsibilities; market analysis; promotions; media; sales principles; marketing success in relation to internal banking functions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Marketing (5/74).

## Money and Banking

**Length: Version 1:** 60 hours (30 weeks).
**Version 2:** 30 hours (15 weeks).
**Version 3:** 40 hours (15 weeks).

**Dates: Version 1:** September 1963—December 1975.
**Version 2:** January 1976—August 1981.
**Version 3:** September 1981—Present.

**Objective:** To provide the student with an indepth knowledge of the money and banking mechanism within the total economic system.

**Instruction: Version 1:** Two semesters devoted to the nature and functions of money and the development of monetary standards, of the commercial banking structure and its unique money-creating function, of interest rate determinations, and of a commercial bank's earning assets. The Federal Reserve System in its monetary policy role; monetary policy vis-a-vis fiscal policy; international monetary functions and problems. Emphasis is placed on relating the course content to present-day monetary problems (inflation, devaluation, and international money flows.) **Version 2:** Knowledge and appreciation of the role of financial institutions in the functioning of the U.S. economy are developed. The nature of money and the money supply; liquidity management; bank loans and investments; bank earnings and capital; the role of the Federal Reserve System. **Version 3:** Role of money and banking in the U.S. economy; bank creation of money; bank asset and liability management; the regulatory and competitive environment in which depository institutions operate; structure and function of the Federal Reserve System; foundations of monetary theory; formulation and impact of monetary policy.

**Credit recommendation: Version 1:** In the lower division baccalaureate/ associate degree category or in the upper division baccalaureate category, 4 semester hours in Finance or Money and Banking (5/74). **Version 2:** In the lower division baccalaureate/ associate degree category or in the upper division baccalaureate category, 2 semester hours in Finance or Money and Banking (8/76). **Version 3:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (5/81).

## Principles of Banking

**(Formerly Commercial Banking Principles)**

**Length: Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates: Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective:** Within a basic academic program in commercial banking, to provide the student with a fundamental course which presents terminology, documents, and processes of the commercial bank as well as an historical and organizational overview of commercial banking.

**Instruction:** Overview of the services and functions of a commercial bank through a study of its components and controls. The banking function; history and development of the commercial banking system; deposit and payment function; loans and investments; other services (money management, international, fiduciary, computerized payroll, and billing); the Federal Reserve System; governmental supervision.

**Credit recommendation: Version 1:** In the lower division baccalaureate/ associate degree category, 2 semester hours in Banking, Economics, or Finance (5/74). **Version 2:** In the lower division baccalaureate/ associate degree category, 3 semester hours in Banking, Economics, or Finance (5/81).

## Reading and Study Skills Development

**Length:** 27 hours (15 weeks).

**Dates:** January 1981—Present.

**Objective:** To assist the student in becoming a more efficient reader of a variety of materials; to improve the student's study and organizational skills; to increase the student's vocabulary.

**Instruction:** The course systematically helps the student acquire the basic skills necessary for successful college study. Emphasis is placed on improving critical reading skills, comprehension, retention, reading rate, and vocabulary. Efficient use of time; techniques of effective classroom note taking, text outlining, and examination preparation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in an elective area (5/81).

## Real Estate and Mortgage Principles

**(Formerly Real Estate Mortgage Principles)**

**Length: Version 1:** 60 hours (30 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates: Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective: Version 1:** To provide the student with an understanding of the home mortgage investment area, of concern to both thrift institutions and commercial banks. **Version 2:** To provide the student with an understanding of real estate principles and mortgage investments of concern to financial institutions.

**Instruction: Version 1:** An intensive two-semester survey course designed to familiarize the student with the legal and financial fundamentals of real estate investing and mortgage financing. Real estate ownership; transactions; title searches and closings; appraising; brokerage and investment. **Version 2:** A survey course designed to familiarize the student with the legal and financial fundamentals of real estate investing and mortgage financing. Real estate contracts; deeds; mortgages; the secondary mortgage market; property ownership; title searches; closings; appraising; real estate brokerage; interest rates and governmental regulations.

**Credit recommendation: Version 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Banking, Business Administration, Economics, or Finance (5/74). **Version 2:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking, Business Administration, Economics, or Finance (5/81).

## Real Estate Mortgage Principles

Refer to Real Estate and Mortgage Principles.

## Savings Bank Accounting

**Length:** 30 hours (15 weeks).

**Dates:** September 1963—July 1981.

**Objective:** To provide the student with a practical understanding of the internal accounting treatment of all transactions within a savings bank.

**Instruction:** The accounting treatment of transactions as they normally occur in the daily operations of a savings bank; accruals; reserves; accounting and statistical records; banking department and other reports; relationship and responsibilities of the accounting departments and management. Practical problems are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Accounting or Finance (5/74).

## Savings Bank Life Insurance

**Length: Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates: Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective: Version 1:** To provide the student with a practical understanding of life insurance sales, with specific reference to savings bank life insurance (SBLI) sales and service. **Version 2:** To provide the student with a practical understanding of life insurance principles, with specific reference to savings bank life insurance (SBLI) sales and service.

**Instruction: Version 1:** Practical approach to savings bank life insurance and its relation to savings banking. Product knowledge of SBLI: familiarity with plans offered; underwriting rules; limitations; rate book premium calculation; preparation of SBLI proposals; completion of applications. **Version 2:** Basic life insurance policies, including premium dividends, forfeiture values, settlement options and annuities, double indemnity, waiver of premium benefits, variable annuities, legal aspects, and structure and practice as required by the New York State Insurance Department. A practical approach to SBLI that prepares the student for the New York State Life Insurance Examination.

**Credit recommendation: Version 1:** In the lower division baccalaureate/ associate degree category, 2 semester hours in Finance or Savings Bank Life Insurance (5/74). **Version 2:** In the upper division baccalaureate category, 3 semester hours in Finance or Insurance (5/81).

## Savings Bank Operations

**Length: Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).
**Dates: Version 1:** September 1969—August 1981.
**Version 2:** September 1981—Present.

**Objective: Version 1:** To provide the student with an understanding of the internal operations of a savings bank and the external regulations surrounding the savings function in New York State savings banking at the present time. **Version 2:** To provide the student with an understanding of the internal operations of savings banks and the external regulations surrounding the industry.

**Instruction: Version 1:** The departmental operations of the savings bank within the law, rules, and regulations of the New York State Banking Department and the Federal Deposit Insurance Corporation. Tellers paying and receiving money; payment problems; recording of transactions and proving procedures; payment of interest; liquidity; bank operating expenses; accounting of all financial transactions through to the General Ledger; preparation of the Statement of Condition and the Profit and Loss Statement; the auditing function throughout the bank; the effect of the investment policy; objectives of bank management. **Version 2:** All phases of savings bank operations, including handling of consumer and mortgage loan requests, checking accounts, and safe deposit operations, as well as other services offered by savings banks and organizations affiliated with them. Paying and receiving; decedent accounts; savings account negotiable instruments; abandoned accounts; payment of dividends/interest; passbook loans (time, demand, interest savings, and money market); laws that affect the operations area. Analysis of a savings bank's "Statement of Condition," including a summary of income and expense.

**Credit recommendation: Version 1:** In the lower division baccalaureate/ associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking, Business Administration, Economics, or Finance (5/74). **Version 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking, Business Administration, Economics, or Finance (5/81).

## Savings Bank Organization
### (Formerly Savings Banking Organization)

**Length: Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).
**Dates: Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective:** To provide the student with a detailed knowledge of the operations, structure, and role of thrift institutions in the U.S. economy.

**Instruction: Version 1:** Basic overview of mutual savings banking; history and types of thrift institutions; structure, markets, and sources of funds; rules and regulations under which savings banks operate. **Version 2:** A basic overview of mutual savings banking, with particular attention to New York State savings banking powers. History and types of thrift institutions; structures, markets, and sources of funds; laws, rules, and regulations under which savings banks operate.

**Credit recommendation: Version 1:** In the lower division baccalaureate/ associate degree category or in the upper division baccalaureate category, 2 semester hours in Banking, Business Administration, Economics, or Finance (5/74). **Version 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking, Business Administration, Economics, or Finance (5/81).

## Savings Banking Organization

Refer to Savings Bank Organization.

## Speech

**Length:** 40 hours (15 weeks).
**Dates:** September 1981—Present.

**Objective:** To provide the student with an opportunity to develop effective oral communications skills.

**Instruction:** The course emphasizes the acquisition of the basic skills necessary to speak effectively and confidently in the business environment. Proper voice and diction skills are introduced through lecture and individual drills. Lectures and student performance focus on the theoretical and practical aspects of the preparation and delivery of speeches of information, demonstration, persuasion, and those appropriate to special occasions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration, Business Communication, or Speech (5/81).

## Trust Department Services

**Length: Version 1:** 30 hours (15 weeks).
**Version 2:** 40 hours (15 weeks).

**Dates:** **Version 1:** September 1963—August 1981.
**Version 2:** September 1981—Present.

**Objective:** To provide the student with a fundamental knowledge of the principles and policies underlying the various fiduciary services offered by financial institutions.

**Instruction:** **Version 1:** Survey of all important services and functions of a trust department in a financial institution. Property and property rights; wills; settlement of estates; responsibilities of executors and administrators; personal agencies; corporate agencies; employee trusts; pension trusts; community and institutional trusts and agencies. **Version 2:** Survey of services and functions of a trust department in a financial institution: acquisition of trust powers; government supervision; property and property rights; wills; settlement of estates; responsibilities of executors and administrators; personal trusts; insurance trusts; guardianships; personal agencies; corporate trusts and agencies; employee benefit trusts.

**Credit recommendation:** **Version 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Money and Banking (5/74). **Version 2:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (5/81).

# AMERICAN INSTITUTE OF BANKING
# ROCHESTER CHAPTER

The Rochester Chapter of the American Institute of Banking (AIB) provides academic and professional courses in contemporary areas of banking activities for employees of 12 banking institutions in the Rochester Area.

The curriculum consists of foundation courses, banking function courses, management and supervision courses, and language and communication courses leading to a Basic, Standard, Advanced, or General Certificate in Banking. These programs blend academic and technical banking curricula frequently not duplicated in collegiate or vocational institutions.

Please note that the credit recommendations listed below apply *only* to courses offered by the Rochester Chapter of AIB.

Source of official student records: Office of Manager, American Institute of Banking, Room 816, 19 West Main Street, Rochester, New York 14614.

### Accounting I

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1967—Present.

**Objective:** To provide the student with an understanding of the introductory concepts and practices of accounting.

**Instruction:** Basic financial statements; setting up accounts; trial balance and worksheet; closing the books; cash receipts and disbursements journal; banking procedures; special journals; accounts receivable and payable ledger; depreciation and adjustments; classified statements; payroll.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (5/77).

### Accounting II

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1967—Present.

**Objective:** To provide the student with a more advanced knowledge of the concepts and techniques of financial accounting, including an explanation of how accounting can be used by managers in planning and controlling business activities.

**Instruction:** Departmentalized accounting; partnership accounting; branch accounting; corporation accounting; manufacturing and cost accounting principles; statement analysis. (Prerequisite: Accounting I.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (5/77).

### Analyzing Financial Statements

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1967—Present.

**Objective:** To develop the student's knowledge of the analysis procedure used by financial institutions in determining the credit worthiness of a company.

**Instruction:** The principles and policies involved in the appraisal of credit risk through analysis of accounting statements of financial conditions; analysis of the balance sheet; profit and loss statement; the use of the worksheet in analysis; working capital analysis; accounts receivable analysis; inventory analysis; budget. (Prerequisites: Accounting I and Accounting II or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (5/77).

### Bank Management

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1967—Present.

**Objective:** To give the student a basic understanding of bank management decisions and their impact on customers, shareholders, and employees.

**Instruction:** The nature and objectives of banking; organizing, planning, staffing, and controlling; the deposit function; the employment of bank funds; the loan function; bank investments; current management issues.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking or Business Administration (5/77).

### Basic Psychology

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide an introduction to the principles of psychology.

**Instruction:** Examination of the various stages of human growth and development, including learning, perception, personality development, and motivation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Psychology (5/77).

### Business Administration

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide the student with an understanding of business and the methods and procedures used in making business decisions, and a familiarity with business terminology.

**Instruction:** Business and society; ownership, organization, and management; marketing; finance; quantitative controls; legal and regulatory environment of business.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration (5/77).

### Business Communication by Letter and Memo

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1974—Present.

**Objective:** To enable the student to become more proficient at writing business letters, memos, and reports.

**Instruction:** Fundamental principles underlying modern business correspondence; types of letters; business reports; form letters; oral communication and effective listening; good will letters.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Business Communication (5/77).

### Business Financial Management (Management Finance)

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1977—Present.

**Objective:** To develop in the student a comprehensive understanding of the ways in which businesses finance their initial and continuing daily operations.

**Instruction:** Determining the firm's need for financing; source of funds; flow of cash; financial analysis; evaluation; cost of funds; long-term financing; securities; bonds; leasing; using business funds; management of accounts receivable; investment in fixed assets; merger; reorganization and liquidation. (Prerequisites: Accounting I, Accounting II, and Principles of Economics.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Managerial Finance (5/77).

### Business Math

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1970—Present.

**Objective:** To provide the student with knowledge of the fundamentals of applied business mathematics.

**Instruction:** Basic application of mathematics to business problems. Personal banking records; inventory and turnover; charges for credit; sales activities and records; depreciation; discount and interest; promissory notes; interest variables; security transactions. Workbook exercises are used with each lesson.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration (5/77).

### Business Psychology

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide the student with knowledge of the psychological and social aspects of human behavior that are particularly relevant to a business environment.

**Instruction:** Psychological principles and findings are applied to cases in the areas of personnel selection and placement, career counseling, motivation, worker efficiency, communication, morale, job satisfaction, measurement of performance, group dynamics, and human resource development. (Prerequisite: Basic Psychology.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Organizational Psychology (5/77).

### Credit Administration

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1971—Present.

**Objective:** To provide the student with an understanding of credit and loan administration.

**Instruction:** Study of the credit and loan function in the context of overall banking operations. Lending types and techniques; methods of credit investigation; sources of credit information; credit techniques; credit correspondence; types of bank loans. (Prerequisites: Accounting I, Accounting II, and Analyzing Financial Statements, or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (5/77).

### Effective English for Business Communication

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1970—Present.

**Objective:** To enable the student to develop effectiveness in reading, writing, listening, and speaking, and the application of the fundamental principles of word usage, grammar, and style.

**Instruction:** Purposes of writing; organizing ideas; paragraphs; sentences; diction; choice of words; style; persuasion; business letters; review of grammar and usage; vocabulary; research papers.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration, Business Communication, or English (5/77).

### 1. Instalment Credit I
### 2. Instalment Credit II

**Location:** Various area bank and college facilities.

**Length:** 1. 45 hours (15 weeks).
2. 45 hours (15 weeks).

**Dates:** September 1977—Present.

**Objective:** To provide the student with basic knowledge of instalment credit and its administration.

**Instruction:** Instalment credit; the techniques of instalment lending; establishing credit; obtaining and checking information; rate structure and yield analysis; servicing the loan and collecting the amounts due; special loan programs; marketing instalment credit.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (5/77). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Law and Banking
### (Business Law)

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1971—Present.

**Objective:** To provide the student with a knowledge of the basic concepts of business law, with emphasis on the Uniform Commercial Code.

**Instruction:** Jurisprudence; the court system and civil procedure; contracts; property; torts; agencies; partnerships; corporations; Uniform Commercial Code; commercial paper; bank deposits; collections; documents of title and secured transactions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Law (5/77).

### Marketing for Bankers

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide the student with an understanding of bank marketing strategies.

**Instruction:** Development of bank marketing approaches using such marketing concepts as: marketing information, research, and target; product distribution; promotion and pricing strategies; advertising; public relations; and marketing planning.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Marketing (5/77).

### Money and Banking

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1970—Present.

**Objective:** To give the student a broad understanding of the function of the American financial system and the role of money and credit within the total economic system.

**Instruction:** Structure of the commercial banking system and other financial institutions; banks and the money supply; bank investments and loans; the Federal Reserve System; international monetary systems. (Prerequisite: Principles of Economics.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Money and Banking (5/77).

### Negotiable Instruments

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1977—Present.

**Objective:** To provide an overview of the legal aspects of negotiable instruments used in bank deposits, collection operations, and payment.

**Instruction:** Legal aspects of bank operations; commercial paper; check processing and collection; alternative payment mechanism. (Prerequisites: Principles of Bank Operations and Law and Banking or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking (5/77).

### Principles of Bank Operations

Refer to Principles of Banking.

### Principles of Banking
#### (Formerly Principles of Bank Operations)

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1975—Present.

**Objective:** To provide the student with an understanding of the fundamentals of bank functions.

**Instruction:** Commercial banks and the monetary system; negotiable instruments; deposit function; payment function; loans and investments; current banking topics; bank accounting; marketing of bank services; external regulations; internal controls; banking and public services.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking or Finance (5/77).

## Principles of Economics

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1967—Present.

**Objective:** To provide the student with knowledge of the theory and practical application of the basic concepts of economics.

**Instruction:** Survey of basic economics concepts, with emphasis on macroeconomic theory. Macroeconomic concepts; major economic problems (unemployment, inflation, technological change, and the business cycle); measurement of economic inputs and outputs; money and economic growth; money and the banking system; the Federal Reserve System; money and taxation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Economics (5/77).

## Savings Bank Organization

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1975—Present.

**Objective:** To provide the student with a knowledge of the operations, structure, and role of the mutual savings banks in U.S. economy.

**Instruction:** History and traditions of savings banking; types of savings institutions; structure; markets; problems; present rules and regulations under which savings banks operate in New York State.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking or Finance (5/77).

## Security Analysis

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1975—Present.

**Objective:** To give the student an overview of security analysis and portfolio management techniques.

**Instruction:** Investment versus speculation; investment process; categories and choices; security valuation and return; risk; common stock analysis; industry analysis; earnings forecasting; bond analysis; technical analysis; efficient market theory; portfolio analysis. (Prerequisites: Accounting I, Accounting II, and Economics, or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (5/77).

## Supervision and Personnel Administration

Refer to Supervision: Concepts and Principles.

## Supervision: Concepts and Principles

**(Formerly Supervision and Personnel Administration)**

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1967—Present.

**Objective:** To enable the student to understand the role and functions of a manager and to acquaint the student with the problems which may confront a supervisor and ways to solve them.

**Instruction:** Planning; organizing; staffing; directing; controlling; effective communication; motivation; salary and wage administration; performance appraisal. The course includes the use of lecture/discussion and case study problems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration (5/77).

## Trust Function and Services

**Location:** Various area bank and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1967—Present.

**Objective:** To provide the student with knowledge of the principles and policies underlying the various fiduciary services offered by financial institutions.

**Instruction:** Survey of major services and functions of a trust department in a financial institution. Property and property rights; wills; settlements of estates; responsibilities of executors and administrators; personal agencies; corporate agencies; employee trusts; pension trusts; community and institutional trusts and agencies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking (5/77).

# AMERICAN INSTITUTE OF BANKING WESTCHESTER COUNTY CHAPTER

The Westchester County Chapter of the American Institute of Banking (AIB) provides academic and professional courses in contemporary areas of banking activities for employees of Westchester County banking institutions. Day and evening instruction is provided.

The courses listed below constitute the Chapter's Basic, Standard, Advanced, and General Certificate programs. These programs combine academic and technical banking curricula frequently not duplicated in collegiate or vocational institutions. The courses are taught in high school and college classrooms throughout Westchester County.

Please note that the credit recommendations listed below apply *only* to courses offered by the Westchester County Chapter of AIB.

Source of official student records: Director of Education, American Institute of Banking, c/o Bank of New York, 60 Mitchell Place, White Plains, New York 10601.

## Accounting I

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To provide the student with an understanding of the introductory concepts and practices of accounting.

**Instruction:** Basic financial statements; setting up accounts; trial balance and worksheet; closing the books; cash receipts and disbursements journal; banking procedures; special journals; accounts receivable and payable ledger; depreciation and adjustments; classified statements; payroll. (Prerequisite: Business Mathematics.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (6/78).

## Advanced Effective English

Refer to Effective English, Accelerated.

## Analyzing Financial Statements I

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To develop the student's knowledge of the analysis procedure used by financial institutions in determining the credit worthiness of a company.

**Instruction:** The principles and policies involved in the appraisal of credit risk through analysis of accounting statements of financial conditions; analysis of the balance sheet; profit and loss statement; the use of the worksheet in analysis; working capital analysis; accounts receivable analysis; inventory analysis; budget. (Prerequisite: Accounting I.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (6/78).

## Basic Psychology

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1976—June 1981.

**Objective:** To provide the student with an introduction to psychology as a behavioral science.

**Instruction:** Human development in infancy, childhood, adolescence, and adulthood; learning and perception; motivation. Methods such as case studies, student projects, films, and readings are used to develop a comprehensive and accurate understanding of human behavior.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Behavioral Science (5/78).

## Business Administration (Introduction to Business)

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** May 1968—June 1981.

**Objective:** To give the student an overview of business organizations and how they operate in the United States.

**Instruction:** A general survey of the types and structures of business organizations. Emphasis is placed on the managerial responsibility of coordinating the many facets of a business enterprise. Administration, financial management, production, labor-management relations, marketing, coordination and control, and public relations are stressed.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration (5/78).

### Business Mathematics
### (Fundamentals of Business Mathematics)

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1976—June 1981.

**Objective:** To provide the student with skills in business arithmetic and accounting terminology and concepts.

**Instruction:** Basic application of mathematics is examined in order to develop a working knowledge of personal banking records, inventory and turnover, charges for credit, sales activities and records, depreciation, discount and interest, promissory notes, interest variables, and securities transactions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration (5/78).

### Business Writing

**(Formerly Bank Writing and Communications)**

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1976—June 1981.

**Objective:** To enable the student to improve his/her writing skills, with specific emphasis given to business writing.

**Instruction:** To strengthen mastery of writing skills with the overall goal that such skills be used appropriately in preparing concise, well-planned business letters, memoranda, and reports. Regular written exercises are used to develop these skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Communications or English (5/78).

### Credit Administration
### (Bank Lending)

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To provide the student with an overview and understanding of the bank lending function.

**Instruction:** Bank policies; commercial banks as extenders of credit; introduction to lending; various types of loans (capital, secured, term, real estate, instalment); other aspects of lending; introduction to credit department administration; credit investigation; analysis of financial statements; workout situations; opportunities and responsibilities of the bank lending officer. (Prerequisite: Accounting I.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (6/78).

### Effective English

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** May 1968—June 1981.

**Objective:** To enable the student to develop skill in reading comprehension, in the use of grammatical concepts, and in the development of written expression.

**Instruction:** Fundamental principles underlying effective use of the English language; ways in which communication may be heightened by proper use of the techniques of language; mastery of language through wide reading, an interest in words, and practice in writing. The need to consider the communication and the audience to which it is addressed is stressed.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in English (5/78).

### Effective English, Accelerated

**(Formerly Advanced Effective English)**

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1978—June 1981.

**Objective:** To enable the student to gain skill in reading comprehension and expository writing.

**Instruction:** Techniques of writing essays, formal arguments, research papers, and analyses are emphasized. Readings include essays, short stories, and novels.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in English (5/78).

### Effective Speaking

Refer to Oral Communications for Bankers.

### Fundamentals of Bank Data Processing

Refer to Introduction to Computers.

### Human Relations Development

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1977—June 1981.

**Objective:** To increase the student's self-awareness and facilitate effectiveness in interpersonal communication in an industrial environment.

**Instruction:** How to be an effective helping agent for others; how to affect the behavior of others; how to resolve conflict of needs; how to explore the ways in which environmental factors affect human communication; transactional analysis.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Applied Behavioral Science (5/78).

### Instalment Credit

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To provide the student with an introduction to instalment credit and its administration.

**Instruction:** Techniques of instalment lending (establishing the credit, obtaining and checking information, servicing the loan, collecting amounts due, credit evaluation, and collection policies and procedures); legal aspects; financial statement analysis; credit department management; indirect instalment lending. (Prerequisite: Principles of Bank Operations.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Finance (6/78).

### International Banking

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To present the student with the basic framework and fundamentals of international banking, including the transfer of money, the financing of trade, the role of international agencies, the work of commercial banks, and foreign currency transactions.

**Instruction:** World of international banking; international activities of United States and foreign banks; correspondent banking relationships; foreign exchange; letters of credit; bankers' acceptances; collections; international lending; Euro-dollar market.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking or Finance (6/78).

### Introduction to Computers

**(Formerly Fundamentals of Bank Data Processing)**

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To provide the student with the basic concepts of electronic data processing with special reference to bank automation.

**Instruction:** Survey of data processing and computer concepts as applied to banks; data recording, processing, and input and output; computer programming (flow charting and coding). A visit is made to a bank data processing center. (Prerequisite: Business Mathematics.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electronic Data Processing (6/78).

### Law and Banking

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1976—June 1981.

**Objective:** To provide the student with a knowledge of the basic concepts of business law, with emphasis on the Uniform Commercial Code.

**Instruction:** Court system and civil procedures; contracts; quasi-contracts; property; torts and crimes; agency; partnerships; corporations; sales of personal property; commercial paper and bank deposits/collections; documents of title; secured transactions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business Administration or Business Law (6/78).

### Macroeconomics

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1978—June 1981.

**Objective:** To provide the student with a knowledge of the theory and practical application of the basic concepts of macroeconomics.

**Instruction:** Price system; comparative economic systems; supply, demand, and equilibrium; elasticity of demand; circular flow; inflation; unemployment; national income accounting; aggregate supply and demand; the multiplier; fiscal policy; consumption and investment; business cycles; the Federal Reserve System; money creation; the public sector; economic growth.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Economics (6/78).

### Management Psychology

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1973—June 1981.

**Objective:** To provide the student with an understanding of the various organizational factors and procedures that determine career growth and progress.

**Instruction:** Growth and history of the human relations concept; the supervisor's job; leadership and its effect on employees; motivation and job advancement; training new employees; self-development and development of others; problem solving.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Behavioral Science or Business Administration (5/78).

## Marketing for Bankers

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1976—June 1981.

**Objective:** To provide the student with an understanding and appreciation of the marketing function in banking.

**Instruction:** Marketing concept; the market and market segmentation; market research; consumer motivation and behavior; consumerism; controlling marketing efforts; product; price; distribution; advertising; promotion; presentations. (Prerequisites: Macroeconomics and Principles of Bank Operations.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Marketing (6/78).

## Money and Banking

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To give the student a broad understanding of the function of the American financial system and the role of money and credit within the total economic system.

**Instruction:** Structure of the commercial banking system and other financial institutions; banks and the money supply; bank investments and loans; the Federal Reserve System; international monetary systems. (Prerequisite: Macroeconomics.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business Administration, Finance, or Money and Banking (6/78).

## Negotiable Instruments

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To provide the student with an overview of the legal aspects of negotiable instruments used in bank deposits, collection operations, and payments.

**Instruction:** Characteristics of negotiable instruments; holder in due course; contractual responsibilities and liabilities of the parties to a negotiable instrument; warranties; bank deposits; collections. (Prerequisite: Law and Banking.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business Administration or Business Law (6/78).

## Oral Communications for Bankers

**(Formerly Effective Speaking)**

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** May 1968—June 1981.

**Objective:** To enable the student to develop effective oral communication skills.

**Instruction:** The acquisition of basic skills and confidence needed to speak effectively; introduction to the behavioral principles underlying effective oral communications; the organization of content; building self-confidence and poise; use of body and voice mechanisms as effective tools of communication.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Communications or English (5/78).

## Principles of Auditing

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1972—June 1981.

**Objective:** To provide the student with an understanding of good audit practices in effective bank management.

**Instruction:** Audit principles, techniques, and procedures; internal control; auditing in small banks; audits by directors; customer confirmation; trust department auditing; auditing EDP systems. (Prerequisite: Principles of Bank Operations.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting (6/78).

## Principles of Bank Operations

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To provide the student with an understanding of the fundamentals of bank functions.

**Instruction:** Commercial banks and the monetary system; negotiable instruments; the commercial bank and its depositors; the deposit function; the payment function; loans and investments; management of bank funds; savings accounts and other time deposits; commercial bank loans; safe deposit; specialized services; bank accounting; marketing of bank services; evolution of American banking; external regulation; internal controls; banking and public services.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Business Administration (6/78).

## Principles of Savings Bank Operations

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To provide the student with a knowledge of the operation, structure, and role of savings banks in the United States economy.

**Instruction:** Personal savings institutions; deposits; the payments function; check processing; real estate mortgage loans; consumer loans; life insurance; marketing; powers and organization; supervision.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Banking or Business Administration (6/78).

## Real Estate Finance I

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To provide the student with an understanding of the financing of real estate.

**Instruction:** Channeling of funds into the mortgage markets; financing of residential and special-purpose property; administrative tasks common to most mortgage departments.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business Administration or Finance (6/78).

## Savings Bank Life Insurance I

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** January 1978—June 1981.

**Objective:** To prepare students for the New York State examination in savings bank life insurance.

**Instruction:** Insurance and its uses; basic life insurance policies; premiums, dividends, and nonforfeiture values; additional policy provisions; settlement options and annuities; double indemnity and waiver of premium benefits; legal phases of life insurance; New York Savings Bank Life Insurance; selected provisions of New York Insurance Law.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Insurance (6/78).

## Supervision and Personnel Administration

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** May 1968—June 1981.

**Objective:** To enable the student to understand the functions of a personnel department and the personnel-related responsibilities of management.

**Instruction:** Organization of work and jobs; organization of personnel; program for personnel management; personnel recruitment; selection; employee development; performance evaluation; motivation and job satisfaction; communication; leadership and supervision; administering change; unions and personnel management; wage and salary administration; employee benefits and security.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business Administration (5/78).

## Techniques for Modern Management

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** September 1976—June 1981.

**Objective:** To assist the student in developing skills and techniques necessary for effective management.

**Instruction:** A study of the applied behavioral sciences, organization theory, and current writings on management style and technique. Detailed analysis and discussion are given to the development of practical applications of management techniques in the bank environment, with special focus on contemporary issues that managers face in day-to-day situations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration (5/78).

## Trust Functions and Services

**Location:** Various area high school and college facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1968—June 1981.

**Objective:** To provide the student with knowledge of the services rendered by institutions engaged in trust business.

**Instruction:** Trust powers and government supervision; trust department services; property and property rights; wills; settlement of estates; personal and insurance trusts and their management; essential features of personal trust instruments; personal agencies; guardianships; employee benefit trusts; corporate trusts and their management; corporate agencies.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking, Business Administration, or Business Law (6/78).

# THE AMERICAN JEWISH COMMITTEE

The American Jewish Committee is an intergroup relations agency founded in 1906 in response to the anti-Jewish pogroms in Russia to protect the Jewish victims of persecution. It now has chapters in all parts of the country and a membership of 40,000. The Committee sponsors programs designed to foster human rights and combat bigotry for all people, both here and abroad, but has special concern for the rights and freedom of Jews in America and throughout the world.

The Committee established the Academy for Jewish Studies Without Walls in 1974 as part of its overall effort to promote understanding of issues of concern to Jews by means of educational programs. The Academy offers courses through correspondence to provide a flexible educational framework for the study of Jewish history and thought. The courses were designed by a broad range of scholars in Judaic studies. A person who wishes to use a course for college credit must take a proctored examination at the completion of the course.

Source of official student records: Director, Academy for Jewish Studies Without Walls, 165 East 56th Street, New York, New York 10022.

## The American Jewish Experience in Literature (10)

**Location:** Correspondence.

**Length:** 10 lessons.

**Dates:** September 1978—Present.

**Objective:** To examine the ways in which literature mirrors the attitudes, values, and concerns of American Jews.

**Instruction:** Analysis of themes in popular Jewish culture through the reading of such authors as Abraham Cahan, Herman Wouk, Philip Roth, Bernard Malamud, and Chaim Potok.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in American Literature or Judaic Studies (8/78).

## Biblical Thought (2)
## (Issues in Biblical Studies)

**Location:** Correspondence.

**Length:** 12 lessons.

**Dates:** September 1978—Present.

**Objective:** To provide an understanding of the construction of the Bible and its key concepts within their historical setting.

**Instruction:** Treatment of such topics as: conception of God; creation; law; prophecy; the religious cult; exile; and restoration. Course focuses on the reading of the Bible and Samuel Sandmel's "The Enjoyment of Scripture."

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Judaic Studies, Literature, or Religion (8/78).

## Bioethical Issues in the Rabbinic Tradition (7)

**Location:** Correspondence.

**Length:** 12 lessons.

**Dates:** September 1978—Present.

**Objective:** To provide an examination of the ways in which bioethical issues are treated in the classical Rabbinic tradition.

**Instruction:** Treatment of such major topics as: contraception; abortion; organ transplants; medical experimentation; and the definition of death, within the framework of classical Rabbinic tradition and sources.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Judaic Studies or Philosophy (8/78).

## Foundations of Judaism (1)

**Location:** Correspondence.

**Length:** 8 lessons.

**Dates:** September 1978—Present.

**Objective:** To present an overview of basic concepts of Judaism.

**Instruction:** Fundamental concepts of the Jewish faith including: nature of Jewish theology; unity of God; concepts of Torah; chosen people; holy land; mankind; and human nature.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Classics, Judaic Studies, Philosophy, or Religion (8/78).

## Hasidism (6)

**Location:** Correspondence.

**Length:** 9 lessons.

**Dates:** September 1978—Present.

**Objective:** To present an overview of the history and religious values of the Hasidic movement within Judaism.

**Instruction:** History of the popular mystical movement of Hasidism; Hasidic interpretation of Jewish religious values including the conception of God, man, prayer, and the religious life.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Judaic Studies, Philosophy, or Religion (8/78).

### History of American Jewry (8)

**Location:** Correspondence.

**Length:** 12 lessons.

**Dates:** September 1978—Present.

**Objective:** To present a historical survey and analysis of the American Jewry from the colonial period to the present, with emphasis on the twentieth-century experience.

**Instruction:** Jewish life in colonial United States; the Sephardic German and East European waves of immigration; intra-ethnic controversies; anti-semitism in the United States; selected issues in contemporary American Jewish life.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in American Studies, History, or Judaic Studies (8/78).

### Jewish-Christian Encounter (5)

**Location:** Correspondence.

**Length:** 10 lessons.

**Dates:** September 1978—Present.

**Objective:** To examine the major doctrinal issues on which Jews and Christians differ.

**Instruction:** Jewish Messianic expectations in the Bible; the question of Deicide; Paul and the Jewish People; Messiah and Christ; Law and Gospel-Letter and Spirit; current problems of reconciliation between the Jewish and Christian communities.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Comparative Religions or Judaic Studies (8/78).

### Modern Jewish Thought (4)

**Location:** Correspondence.

**Length:** 10 lessons.

**Dates:** September 1978—Present.

**Objective:** To examine the ideas of the major Jewish thinkers since the Enlightenment.

**Instruction:** Jewish nationalism; Zionist ideology; Jewish existentialism; religious ideology. These concepts are studied in the writings of Mendelssohn, Cohen, Buber, Rosensweig, Herzl, and Ahad Ha'Am.

**Credit recommendation:** In the lower division baccalaureate/ associate degree category or in the upper division baccalaureate category, 3 semester hours in Judaic Studies or Philosophy (8/78).

### Talmudic Thought (3)

**Location:** Correspondence.

**Length:** 12 lessons.

**Dates:** September 1978—Present.

**Objective:** To provide an analysis of Talmudic literature and its development, presented from historical, conceptual, and philosophical viewpoints.

**Instruction:** Oral Law; Tannaitic and Amoraic literature; Talmudic jurisprudence; Halakha and Jewish life. Readings are in both primary and secondary sources.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Judaic Studies or Religion (8/78).

### Zionism: History and Ideology (9)

**Location:** Correspondence.

**Length:** 12 lessons.

**Dates:** September 1978—Present.

**Objective:** To examine and analyze the emergence and growth of Zionism as a national, political, and ideological movement.

**Instruction:** The beginning of Jewish nationalism; the impact of anti-Semitism; the early Zionist theorists; growth of Zionism as a national, political, and ideological movement prior to 1948; the impact of Zionist theory and practice on Jewish communities of Palestine and the Diaspora before the establishment of the State of Israel; post-statehood Zionism.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in History, Judaic Studies, or Political Science (8/78).

# THE AMERICAN LEGION DEPARTMENT OF NEW YORK

The American Legion is an organization of honorably discharged veterans of World War I, World War II, Korea, and Vietnam, whose primary function is to keep alive a spirit of Americanism in America. Its motive as a veterans organization is to create programs on a national, state, and community level that give assistance to war widows, orphans, and sick and disabled veterans. Local American Legion posts sponsor many activities for youth including American Legion Jr. Baseball, Boy Scout troops, oratorical contests, soap box derbys, Boys' State, and Boys' Nation.

Originated by the Illinois Department of the American Legion, the first Boys' State was convened at Springfield, Illinois in June 1935. It developed from the idea that youth should be offered a better perspective of the practical operation of government, and that the individual is an integral part of both the character and success of government. The Boys' State movement was endorsed by the American Legion in September 1935, and in succeeding years departments in other states joined the movement.

Since the first Boys' State of New York program was held in the summer of 1938, more than 25,000 boys from high schools throughout the State have had the opportunity to attend this intensive citizenship course. Young citizens learn how a republic works, to inspect and accept the American framework of government, and to appreciate their American heritage. Although each department conducts its own State, the department programs are fairly uniform, and are held to a high standard of excellence under the direction of the National Americanism Commission with the assistance of the National Boys' State Committee.

Juniors in high school with leadership qualities are selected to participate in Boys' State. Although the American Legion founded Boys' State and assumes the responsibility of sponsoring it, in most departments patriotic, civic, educational, and fraternal organizations serve as cosponsors with Legion posts in sending delegates to Boys' State.

Source of official student records: Registrar, The American Legion Boys' State of New York, Suite 400, 112 State Street, Albany, New York 12207.

## Boys' State Program of New York

**Location:** State University of New York Agricultural and Technical College, Morrisville, NY.

**Length:** 40 hours (1 week).

**Dates:** June 1980–Present.

**Objective:** To expand and deepen the student's knowledge of the American political system.

**Instruction:** The program is focused on the study of political systems, including local government and politics, and the decisionmaking processes in the executive, legislative, and judicial branches. Students participate in lecture/discussion sessions, seminars, and simulation exercises. During his senior year of high school following the Boys' State experience, each student prepares a major research paper of approximately 30 pages. In addition, each student is required to complete an internship of at least 30 hours during his senior year.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Government or Political Science (6/80).

# AMERICAN TELEPHONE AND TELEGRAPH COMPANY

The American Telephone and Telegraph Company (AT&T), with headquarters in New York City, is the parent corporation of the nationwide Bell System, which consists of AT&T Long Lines, Western Electric, Bell Telephone Laboratories, and 23 Associated Operating Companies. Each operating company handles communications services within a particular geographic region.

AT&T conducts a wide range of courses to meet the needs of both management and nonmanagement employees. The courses range from highly technical offerings in specific disciplines such as accounting, computer science, and engineering to more general programs in areas such as supervisory training, managerial skills development, and job enrichment. Courses are offered on company time and are taught both on premises and at Bell System training centers throughout the country.

Source of official student records: Manager, Training and Development, 295 North Maple Avenue, Room 3136B1, Basking Ridge, New Jersey 07920.

## Forkner Shorthand Program

**Location:** AT&T Training Center, Piscataway, NJ; General Development Headquarters, Basking Ridge, NJ.

**Length:** 128 hours (12-16 weeks); individualized program.

**Dates:** February 1972—December 1979.

**Objective:** To provide the student with an understanding of the principles of Forkner Shorthand in order to develop skill in taking dictation of business letters and transcribing them.

**Instruction:** Principles of Forkner Shorthand (the mastery of writing sounds, short forms and phrases, and basic business vocabulary); language skills development (grammar, spelling, and typographical usage). Practice in business letter dictation and development of transcription techniques. Dictation at varying speeds with a minimum attainment level of 80 wpm for 2 minutes with a maximum of 7 errors. Cassette tapes are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration, Business Education, or Secretarial Science (6/75).

## Secretarial Seminar

**Location:** AT&T Training Center, Piscataway, NJ.

**Length:** 35 hours (1 week).

**Dates:** January 1970—June 1981.

**Objective:** To provide management-level secretaries with simulated office experiences to enable them to organize, administer, and supervise their offices.

**Instruction:** Development of the conceptual and reasoning abilities as well as the human relations skills needed in a management position. Judgment and decision making; techniques for improving job performance; use of knowledge of company organization and departmental functions in making decisions; representing the boss; job planning and organizing; using initiative; effective letterwriting; the boss-secretary team. Case studies, role playing, and in-basket exercises used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Education or Secretarial Science (6/75).

## Training and Orientation Program for Secretaries

**Location:** AT&T Training Center, Piscataway, NJ.

**Length:** 35 hours (1 week).

**Dates:** January 1970—June 1981.

**Objective:** To provide entry-level secretaries with simulated office experiences to enable them to perform the basic secretarial role.

**Instruction:** Work organization; job planning; mail logs; letter writing; files management; conference and travel planning; telephone techniques; handling office visitors; grammar; spelling; business mathematics; business organization. Lecturettes, role playing, subgroup exercises, videotaping/critique sessions, and in-basket exercises used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Education or Secretarial Science (6/75).

## Typing Skills Training

**Location:** AT&T Training Center, Piscataway, NJ; General Development Headquarters, Basking Ridge, NJ.

**Length:** 128 hours (12-16 weeks); individualized program.

**Dates:** January 1971—December 1979.

**Objective:** To provide the student with the basic skills in typewriting and to develop production standards for letters, tabulations, and business forms.

**Instruction:** Mastery of the keyboard with a minimum attainment level of 40-50 gross wpm with a 2.5 percent error limitation; business letters; tabulation; making corrections; use of punctuation and capitalization; memoranda; outlines; manuscripts; business forms; rough drafts. Audiovisuals, cassette tapes, and texts utilized.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration, Business Education, or Secretarial Science (6/75).

### Women: Doing the Management Job

**Location:** Corporate Education Center, Western Electric Company, Princeton, NJ.

**Length:** 46 hours (5½ days); residential.

**Dates:** March 1975—June 1981.

**Objective:** To provide the participants with the understanding necessary to improve and utilize managerial skills.

**Instruction:** Introduction to management theories relating to the development of leadership, including consultation, conflict management, decision making, problem solving, and setting management objectives. Development and utilization of interviewing techniques and processes; handling of sex stereotype problems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Management (11/75).

## HUMAN RESOURCES–TRAINING AND EDUCATION

Source of official student records: Human Resources—Training and Education, Key Instructor of P.A.W., American Telephone and Telegraph Company, 295 North Maple Avenue, Room 6152G3, Basking Ridge, New Jersey 07920.

### Performance Analysis Workshop

**Location:** Various training facilities throughout the Bell System.

**Length:** 25 hours (3 days); residential.

**Dates:** August 1973—June 1981.

**Objective:** To provide management personnel with the knowledge and skills necessary to apply problem-analysis strategies to human performance problems and to recommend and implement cost-effective solutions.

**Instruction:** System for analyzing human performance problems. Identifying or isolating performance problems; determining the value of correcting the problems; determining the causes of the problems, including lack of knowledge and factors in the work environment; selecting strategies for solving the problems. Individual work combined with case studies and group discussions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Problem Analysis (11/74).

## MARKETING FOR AT&T SALES AND MARKETING OFFICIALS

The program entitled Marketing for AT&T Sales and Marketing Officials was conducted by the Bell System Data Communications Training Program in Cooperstown, New York, from October 1961 until June 1970. The content of the program was formulated by a task force composed of personnel from AT&T, the Operating Companies, Bell Telephone Laboratories, and the Western Electric Company. The teaching staff were employees of AT&T with considerable experience in the Bell System and thoroughly conversant in the subject matter. Only three sections of the program were presented for evaluation. The first two sections were considered as one unit for evaluation purposes.

Source of official student records: Supervisor, Corporate Education, 4-2-07G2, American Telephone and Telegraph Company, 295 North Maple Avenue, Basking Ridge, New Jersey 07920.

### Computer Principles

Refer to Data Switching Concepts.

### 1. Data Switching Concepts
### 2. Computer Principles

**Location:** Bell System Data Communication Training Center, Cooperstown, NY.

**Length:** 75 hours (6 weeks); residential.

**Dates:** October 1961—June 1970.

**Objective:** To provide the student with thorough background in modern data communication so he/she can recognize and satisfy the complex communication needs of customers and can provide them with effective and appropriate facilities in the data communications field.

**Instruction:** Boolean algebra; logic theory; computer hardware; computer storage; information retrieval; computer languages (symbolic, BASIC, FORTRAN, and COBOL). Students work on involved data cases and design solutions to specific customer problems. Course format consists of lectures, case studies, and laboratory experiences.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Introduction to Computers (6/74). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Marketing and Sales Principles

**Location:** Bell System Data Communication Training Center, Cooperstown, NY.

**Length:** 77 hours (6 weeks); residential.

**Dates:** October 1961—June 1970.

**Objective:** To provide the student with thorough background in modern data communication so he/she can recognize and satisfy the complex communication needs of customers and can provide them with effective and appropriate facilities in the data communications field.

**Instruction:** Comprehensive foundation of the basic principles of professional salesmanship; the steps in the personal selling process (identifying potential customer segments, planning the initial sales contact, closing the sales call, and servicing customers); development of behavioral science and communication skills (psychology of interpersonal interaction and the art of listening) through role playing, audiovisual techniques, and problem-solving case histories. The teaching approach effectively integrates classroom lectures and student participation through a large number of classroom and homework exercises.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Principles of Salesmanship (6/74).

## SPECIAL PROGRAM IN ENGINEERING ECONOMY FOR PUBLIC UTILITIES

The Special Program in Engineering Economy for Public Utilities is offered by Stanford University each summer to employees of AT&T and other regulated public utilities companies. The instructors in the Program are drawn from Stanford, other universities, and industry. Classroom time is divided between lectures, discussions of cases and problems, and work sessions devoted to the solutions of real problems. In addition to the regular classes, lectures which deal with topics of special interest are given. One series of lectures focuses on the use of the computer for solving engineering economy problems. Major textbooks and reading assignments are sent to participants prior to beginning the Program. Although the Program consists of four separate courses, the credit recommendation applies only to those students who have completed all of them.

Source of official student records: Supervisor, Corporate Education, 4-2-07G2, American Telephone and Telegraph Company, 295 North Maple Avenue, Basking Ridge, New Jersey 07920.

### 1. Accounting Problems and Practices in Public Utilities
### 2. Engineering Economy Applications to Public Utilities
### 3. Finance
### 4. Managerial Economics, Rate Structure, and Pricing in Public Utilities

**Location:** Department of Industrial Engineering, Stanford University, Palo Alto, CA.

**Length: Version 1:** 120 hours (4 weeks); residential.
**Version 2:** 114 hours (3 weeks); residential.

**Dates: Version 1:** July 1962—December 1972.
**Version 2:** January 1973—June 1981.

**Objective:** To provide participants with knowledge and skills highly relevant to current regulated utilities problems and to update their backgrounds in engineering economy for public utilities; to broaden the background of middle management officers for future advancement within the various participating companies.

**Instruction: Course 1:** Relationship between accounting and utility regulations. Allocation of costs among different types of services; mortality studies of physical properties and their relationship to depreciation accounting; the determination of the income tax components of utility revenue requirements. The course includes problems and assigned reading selected to stimulate the participant's ability to make effective use of accounting data both in the evaluation and control of operations and in analysis and decision making concerned with investment. **Course 2:** Provides skills for undertaking detailed analyses of the economic consequences of competing alternative courses of action requiring capital investment. Sunk cost; cash flow; time value of money; risk and sensitivity analysis; income tax effects; minimum revenue requirements; replacement problems. Participants bring examples of engineering economy problems from their companies and the data necessary to present a case study in the program. **Course 3:** General principles of financial management, with special applications and policy questions relating to regulated public utilities. Financial functions and controls; forecasting; uncertainty tools in the capital budgeting area; financial structure and the use of leverage; dividend policy and internal financing. Special emphasis is given to the cost of capital, moving into money and capital markets toward the end of the program. **Course 4:** Selected topics in managerial economics. Demand; price determination; competition; market structure. These topics provide the background necessary to understand and treat the special problems faced by a regulated public utility (marginal cost pricing vs. average cost pricing, rate structures, capital plant expansion, and the economic implications of government regulations).

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Managerial Economics and 3 semester hours in Managerial Finance (6/74). NOTE: Courses 1,2,3, and 4 must all be completed to receive credit.

## Engineering Economy Applications to Public Utilities

Refer to Accounting Problems and Practices in Public Utilities.

## Finance

Refer to Accounting Problems and Practices in Public Utilities.

## Managerial Economics, Rate Structure, and Pricing in Public Utilities

Refer to Accounting Problems and Practices in Public Utilities.

# AMERICAN TELEPHONE AND TELEGRAPH COMPANY LONG LINES

AT&T Long Lines is a department of the American Telephone and Telegraph Company. It provides the interconnecting communication links between the Bell System associated companies and independent telephone companies nationwide. It consists of seven geographic areas, with New York State included in both the New York City area and the Northeastern area.

Long Lines offers courses to both its management and nonmanagement employees. These courses range from instruction in very technical engineering disciplines and marketing techniques to more general programs directed at the development of communication skills, managerial effectiveness, and self-awareness. These courses are offered on company time and employees are released from their normal responsibilities to attend.

## HUMAN RESOURCE CENTER–WHITE PLAINS

Source of official student records: Training Administrator, Human Resource Center, Room 1100C, AT&T Long Lines, 440 Hamilton Avenue, White Plains, New York 10601.

### Communications Workshop (H101)

**Location:** Human Resource Center, 440 Hamilton Avenue, White Plains, NY.

**Length: Version 1 (Management Personnel):** 35 hours (1 week).
**Version 2 (Nonmanagement Personnel):** 28 hours (1 week).

**Dates:** June 1973—Present.

**Objective:** To enable the student to develop effective communications skills.

**Instruction:** Methods of effective communication; understanding and resolving communications barriers; importance of listening, and utilizing feedback. The course includes lecturettes, body language games, problem-solving activities, skill-building games in listening, perceptual awareness activities, simulations, and other structured activities.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Individual Behavior in Small Groups (2/78).

### Labor Relations (H115)

**Location:** Human Resource Center, 440 Hamilton Avenue, White Plains, NY.

**Length:** 20 hours (2½ days).

**Dates:** January 1977—Present.

**Objective:** To provide the participant with basic knowledge and skills in labor relations.

**Instruction:** Students become thoroughly familiar with the company's contract with the union, its basic provisions, and the collective bargaining process. Management rights; grievance process and how to conduct a grievance meeting; attendance problems; job classification; promotion; work performance problems; misconduct; work stoppages; arbitration.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Labor Relations or Personnel Administration (2/78).

### Managers Orientation Conference (H220)

**(Formerly New Supervisory Training [H105])**

**Location:** Human Resource Center, 440 Hamilton Avenue, White Plains, NY.

**Length:** 37½ hours (5 days).

**Dates:** January 1978—Present.

**Objective:** To improve the effectiveness of the new first-level manager.

**Instruction:** Overview of the organization and the functions of the various departments within the company; decisionmaking and problem solving; conflict and resolution; personal growth and awareness. The course includes lectures, discussions, films, and problem-solving and team-building exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Management (2/78). NOTE: This course is a revised version of New Supervisory Training (M105).

### Managing at the First Level (H136)

Refer to New Supervisory Training (M105).

### Managing Managers (H210)

**Location:** Human Resource Center, 440 Hamilton Avenue, White Plains, NY.

**Length:** 32 hours (4 days).

**Dates:** September 1974—Present.

**Objective:** To assist second-level managers in developing key managerial skills required to perform their job functions effectively.

**Instruction:** The role of a second-level manager; delegation of responsibility; management appraisal plan; leadership styles; problem solving and decision making; time management; objective setting (management by objective); motivation; subordinate development. Lecture/discussions and various role-play activities are used to develop skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Behavioral Science or Management (2/78).

### New Supervisory Training (H105)

Refer to Managers Orientation Conference (H220).

### 1. New Supervisory Training (M105)
### 2. Managing at the First Level (H136)

**Location:** Human Resource Center, 440 Hamilton Avenue, White Plains, NY.

**Length:** 1. 72 hours (2 weeks).
2. 24½ hours (4 days).

**Dates:** 1. January 1975—December 1976.
2. January 1975—Present.

**Objective:** To improve the effectiveness of new first-level managers through increased knowledge of management practices and to orient them to company practices.

**Instruction: Course 1:** Fundamentals and applications of management practices (salary administration, labor relations, absence control, personnel practices and appraisal); overview of the organization and functions of the various departments within the company. Approximately one-third of the course is devoted to labor-management relations. Course format consists of lectures, discussions, films and role plays. **Course 2:** Fundamentals of supervision and management practices. Management by objectives; time management; problem solving; motivation (Maslow, Herzberg, work itself/job enrichment); leadership styles (McGregor's Theory X-Theory Y, Blake's managerial grid); appraisal feedback; subordinate development. The course consists of lectures, discussions, individual tasks, and group exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Management (2/78). NOTE: Courses 1 and 2 must both be completed to receive full credit.

## MANAGEMENT RESOURCE CENTER—NEW YORK CITY

Source of official student records: Director of Training, Management Resource Center, Room 2300, AT&T Long Lines, 32 Avenue of the Americas, New York, New York 10013.

### Advanced Human Potential Seminar

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 24 hours (3 days).

**Dates:** August 1977—March 1978.

**Objective:** To enable the participant to identify and manage conflict.

**Instruction:** The course deals in more depth with the topics included in the Basic Human Potential Seminar and introduces the following areas: coping productively with failure, identification of conflict, conflict management and resolution, preventing conflict, life planning, and career planning. The course consists of lectures, films, and small group discussions. The course was organized by, and training for instructors is provided by, the National Center for Human Potential. (Prerequisite: Basic Human Potential Seminar must be completed a minimum of six months prior to enrolling in this course.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Behavioral Aspects of Management or Psychology (8/77).

### Basic Human Potential Seminar

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 24 hours (3 days).

**Dates:** February 1977—June 1981.

**Objective:** To enable the participant to increase his/her self-confidence and motivation and to set and achieve personal goals.

**Instruction:** Motivations and values; analysis of past accomplishments; long- and short-range goal setting; barriers to success; strengths and satisfactions. The course consists of lectures, films, and small group discussions. The course was organized by, and training for instructors is provided by, the National Center for Human Potential.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Behavioral Aspects of Management or Psychology (8/77).

### Communications Workshop (H101)

**(Formerly Communications Workshop [M101])**

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 40 hours (1 week).

**Dates:** June 1975—June 1981.

**Objective:** To enable the student to develop effective communications skills.

**Instruction:** Methods of effective communication; understanding and resolving communications barriers; importance of listening and utilizing feedback. The course includes lecturettes, body language games, problem-solving activities, skill building games in listening, perceptual awareness activities, simulations, and other structured activities.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Individual Behavior in Small Groups (2/76).

### Effective Reading Seminar

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 15 hours (5 days).

**Dates:** July 1977—June 1981.

**Objective:** To increase the participants' reading effectiveness by doubling reading speed and improving comprehension.

**Instruction:** The course teaches strategies for effective reading by identifying the participants' reading problems and by enabling them to understand the importance of using different approaches when reading different types of materials. Tests are administered to check progress in speed and comprehension.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Effective Reading (8/77).

### Effective Speaking Seminar (H116)

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 47 hours (6 days).

**Dates:** February 1975—February 1978.

**Objective:** To enable the student to increase his/her oral communication skills by eliminating or minimizing technical barriers to effective communications, sharpening listening skills and refining conversational skills.

**Instruction:** Barriers and aids to effective listening; active and interactive listening skills; conversational skills; impromptu and prepared speeches; organization of a successful talk; nonverbal communication; syllabication; components of voice mechanism and proper placement for production of phonemes; vocal quality, flexibility, and projection; discussion of vowels, consonants, and combination vowels. The course consists of a combination of lecture, discussion, language laboratories, films, role plays, programmed instruction, and analysis of audiotapes of students' presentations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Communications, Public Speaking, or Speech and Theatre (5/77).

### Effective Writing Styles

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 37½ hours (5 days).

**Dates:** October 1977—January 1979.

**Objective:** To enable the participant to write effectively through the use of proper writing skills.

**Instruction:** Review of English grammar; organization of ideas; proper spelling; memo writing; letter writing; written proposals and recommendations. Approximately half of the course is devoted to writing exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Communications (8/77).

### Labor Relations (H115)

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 18 hours (2½ days).

**Dates:** January 1977—June 1981.

**Objective:** To provide the participant with basic knowledge and skills in labor relations.

**Instruction:** Students become thoroughly familiar with the company's contract with the union, its basic provisions, and the collective bargaining process. Management rights; grievance process and how to conduct a grievance meeting; attendance problems; job classification; promotion; work performance problems; misconduct; work stoppages; arbitration.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Labor Relations or Personnel Administration (8/77).

### Managers Orientation Conference (H220)

**(Formerly New Supervisory Training [H105])**

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 37½ hours (5 days).

**Dates:** January 1977—June 1981.

**Objective:** To improve the effectiveness of the new first-level manager.

**Instruction:** Overview of the organization and the functions of the various departments within the company; decisionmaking and problem solving; conflict and resolution; personal growth and awareness.

The course includes lectures, discussions, films, and problem-solving and team-building exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Management (8/77). NOTE: This course is a revised version of New Supervisory Training (M105) which was evaluated in February 1976.

## Managing at the First Level (H136)

**(Formerly Managing at the First Level [M136])**

Refer to New Supervisory Training (M105).

## Managing Managers (H210)

**(Formerly Managing Managers [M210])**

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 32 hours (4 days).

**Dates:** February 1975– June 1981.

**Objective:** To assist second-level managers in developing key managerial skills required to perform their job functions effectively.

**Instruction:** The role of a second-level manager; delegation of responsibility; management appraisal plan; leadership styles; problem solving and decisionmaking; time management; objective setting (management by objective); motivation; subordinate development. Lecture/discussions and various role-play activities are used to develop skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Behavioral Science or Management (2/76).

## New Supervisory Training (H105)

Refer to Managers Orientation Conference (H220).

## 1. New Supervisory Training (M105)
## 2. Managing at the First Level (H136)

**(Formerly Managing at the First Level [M136])**

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 1. 80 hours (2 weeks).
2. 32 hours (4 days).

**Dates:** 1. January 1975—June 1976.
2. January 1975—June 1981.

**Objective:** To improve the effectiveness of new first-level managers through increased knowledge of management practices and to orient them to company practices.

**Instruction: Course 1:** Fundamentals and applications of management practices (salary administration, labor relations, absence control, personnel practices and appraisal); overview of the organization and functions of the various departments within the company. Approximately one-third of the course is devoted to labor-management relations. Course format consists of lectures, discussions, films, and role plays. **Course 2:** Fundamentals of supervision and management practices. Management by objectives; time management; problem solving; motivation (Maslow, Herzberg, work itself/job enrichment); leadership styles (McGregor's Theory X-Theory Y, Blake's managerial grid); appraisal feedback; subordinate development. The course consists of lectures, discussions, individual tasks, and group exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Management (2/76). NOTE: Courses 1 and 2 must both be completed to receive full credit. If Course 2 is taken alone, 2 semester hours are recommended.

## Vocational Instructor Training (E116)

**(Formerly Vocational Instructor Training [M129])**

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 32 hours (4 days).

**Dates:** January 1975—February 1979.

**Objective:** To enable the student to develop the skills needed to make effective presentations.

**Instruction:** Instructional objectives; four-step teaching process; lesson plans; use of visual aids; measuring teaching effectiveness. Videotaped presentations by the participants on a variety of assigned and selected instruction-related topics are used to teach the material and to provide a basis for critical discussion by the other participants and the course leader.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Oral Communication (2/76).

## Workshop in Problem Solving

**Location:** Management Resource Center, 32 Avenue of the Americas, New York, NY.

**Length:** 37½ hours (5 days).

**Dates:** July 1977—June 1981.

**Objective:** To enable the participant to develop and analyze decisionmaking and problem-solving skills.

**Instruction:** Distinction between decisionmaking and problem solving; approaches to problem solving (logical, creative, group, and individual); consulting and oral presentations. In addition to many problem-solving activities, the course includes an in-basket exercise and a consulting case which allows participants to make recommendations concerning the problems within a given organization.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Management (8/77).

## SYSTEMS AND TECHNICAL EDUCATION CENTER–PISCATAWAY

Source of official student records: The personnel supervisor at the student's division staff office within each region.

### Basic Assembler Language Workshop (L301)

**Location:** Various AT&T Long Lines data centers throughout the United States.

**Length:** 35 hours (1 week).

**Dates:** June 1969–Present.

**Objective:** To provide participants with a knowledge of IBM S/370 Assembler Language Programs.

**Instruction:** AL statements in the fixed point binary set; indexing; DSECT's; OS/VS Linkage; parameter lists; passing parameters; standard sequential files.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Computer Technology or Data Processing (10/79). NOTE: Participants must successfully complete the IBM Assembler Language Coding programmed instruction course number 1LOK3600 to be eligible for credit.

### Basic OS Utilities (L110)

Refer to IBM OS JCL and Utilities.

### Consideration for Physical Data Design (L760)

Refer to Systems Analysis and Design.

### IBM Information Management System (IMS/VS) Applications

### 1. IMS Batch Coding (L451)

### 2. IMS Debugging (L453)

### 3. IMS Data Base Utilities (L457)

**(Formerly IMS Utilities [L457])**

**Location:** Various AT&T Long Lines data centers throughout the United States.

**Length:** 1. 35 hours (1 week).
2. 28 hours (1 week).
3. 21 hours (1 week).

**Dates:** 1. December 1973–Present.
2. January 1973–May 1981.
3. December 1973–Present.

**Objective:** To provide participants with the knowledge and skills necessary to utilize IMS in a batch environment.

**Instruction: Course 1:** Data base concepts; PSB's; data base calls; command codes; Boolean connectors. (Prerequisite: Initial Programmer Training L001.) **Course 2:** IMS control blocks; IMS batch dumps; BTS batch dumps; access methods; VSAM data sets; TP dumps. (Prerequisites: Initial Programmer Training L001 and IMS Batch Coding L451.) **Course 3:** IMS access methods; physical and logical data bases; reorganization and loading; data base recovery and restart. (Prerequisites: Initial Programmer Training L001 and IMS Batch Coding L451.)

**Credit recommendation: Course 1 alone:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Computer Technology or Data Processing (10/79). **Courses 1, 2, and 3:** In the upper division baccalaureate category or in the graduate degree category, 6 semester hours in Computer Technology or Data Processing (10/79). NOTE: Courses 1, 2, and 3 must all be completed to receive credit. Course 1 is also included in the IBM Information Management System (IMS/VS) Data Communications sequence of courses. Care should be taken to avoid the awarding of duplicate credit to those students who have successfully completed both the IBM Information Management System (IMS/VS) Applications sequence of courses and the IBM Information Management System (IMS/VS) Data Communications sequence of courses.

### IBM Information Management System (IMS/VS) Data Communications

### 1. IMS Batch Coding (L451)

### 2. Introduction to Teleprocessing and the Dataspeed 40 (L395)

**(Formerly Introduction to Teleprocessing and the 3270 Information Display System [L395])**

### 3. INTERCOMM Workshop (L401)

### 4. IMS Data Communications Coding (L452)

### 5. IMS Message Format Service (L455)

**Location:** Various AT&T Long Lines data centers throughout the United States.

**Length:** 1. 35 hours (1 week).
2. **Version 1:** 10 hours (1 week).
**Version 2:** 7 hours (1 week).
3. 35 hours (1 week).
4. **Version 1:** 21 hours (1 week).
**Version 2:** 28 hours (1 week).
5. 21 hours (1 week).

**Dates:** 1. December 1973–Present.
2. **Version 1:** January 1973–August 1980.
**Version 2:** September 1980–Present.
3. January 1973–Present.
4. **Version 1:** December 1973–August 1980.
**Version 2:** September 1980–Present.
5. January 1973–Present.

**Objective:** To provide participants with the knowledge and skills necessary to utilize IMS in a batch environment, to understand TP, to code, test, and debug programs in an INTERCOMM environment, to understand and program in the IMS data communications environment, and to utilize the IBM Message Format Service to generate screen formats.

**Instruction: Course 1:** Data base concepts; PSB's; data base calls; command codes; IMS debugging. (Prerequisite: Initial Programmer Training L001.) **Course 2:** Data transmission; polling; networks; TCU functions; BTAM and TCAM access methods. (Prerequisite: Initial Programmer Training L001.) **Course 3:** Applying INTERCOMM to COBOL coding, testing, file handling, string testing, edit and output utilities, restart/recovery, and system testing. (Prerequisites: Initial Programmer Training L001 and Introduction to Teleprocessing and the Dataspeed 40 L395.) **Course 4, Version 1:** IMS on-line and batch programming; PCB's; DL/1 calls; batch terminal simulator. (Prerequisites: Initial Programmer Training L001, IMS Batch Coding L451, and Introduction to Teleprocessing and the Dataspeed 40 L395.) **Course 4, Version 2:** IMS on-line and batch programming; PCB's; DL/1 calls; batch terminal simulator; Basic MFS control block coding; Basic on-line debugging. (Prerequisites: Initial Programmer Training L001, IMS Batch Coding L451, and Introduction to Teleprocessing and the Dataspeed 40 L395.) **Course 5:** Message Format Service (MFS) overview; MFS coding; device format coding; message description coding; device and message I/O; paging; linkage; screen design; programming. (Prerequisites: Initial Programmer Training L001 and IMS Batch Coding L451.)

**Credit recommendation: Course 1 alone:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Computer Technology or Data Processing (10/79). **Courses 1, 2, 3, 4, and 5:** In the upper division baccalaureate category, 8 semester hours in Computer Technology or Data Processing (10/79). NOTE: Courses 1, 2, 3, 4, and 5 must all be completed to receive credit. Course 1 is also included in the IBM Information Management System (IMS/VS) Applications sequence of courses. Care should be taken to avoid the awarding of duplicate credit to those students who have successfully completed both the IBM Information Management System (IMS/VS) Data Communications sequence of courses and the IBM Information Management System (IMS/VS) Applications sequence of courses.

## IBM OS JCL and Utilities

### 1. OS/VS2 Concepts (L150)

### 2. OS/370 JCL (L108)

### 3. Linkage Editor (L030)

### 4. Basic OS Utilities (L110)

**Location:** Various AT&T Long Lines data centers throughout the United States.

**Length:** 1. 18 hours (1 week).
2. 18 hours (1 week).
3. 18 hours (1 week).
4. 32 hours (1 week).

**Dates:** January 1973—Present.

**Objective:** To provide participants with the skills necessary to run programs and use utilities.

**Instruction: Course 1:** Basic components and functions of the S/370 operating system in a virtual storage environment. (Prerequisite: Initial Programmer Training L001.) **Course 2:** OS/370 Job Control Language and checkpoint/restart facilities. (Prerequisite: Initial Programmer Training L001.) **Course 3:** Functions of the Linkage Editor. (Prerequisite: Initial Programmer Training L001.) **Course 4:** Using the Job Control Language and control statements required to execute IBM and AT&T Long Lines utility programs, including creating and maintaining catalogs, index structures, partitioned data sets, and generation data groups. (Prerequisite: Initial Programmer Training L001.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Computer Technology or Data Processing (10/79). NOTE: Courses 1, 2, 3, and 4 must all be completed to receive credit.

## IMS Batch Coding (L451)

Refer to IBM Information Management System (IMS/VS) Applications and IBM Information Management System (IMS/VS) Data Communications.

## IMS Data Base Utilities (L457)

Refer to IBM Information Management System (IMS/VS) Applications.

## IMS Data Communications Coding (L452)

Refer to IBM Information Management System (IMS/VS) Data Communications.

## IMS Debugging (L453)

Refer to IBM Information Management System (IMS/VS) Applications.

## IMS Message Format Service (L455)

Refer to IBM Information Management System (IMS/VS) Data Communications.

## IMS Utilities (L457)

Refer to IBM Information Management System (IMS/VS) Applications.

### Initial Programmer Training (L001)

**Location:** Various AT&T Long Lines data centers throughout the United States.

**Length:** **Version 1:** 472½ hours (13½ weeks).
**Version 2:** 487 hours (14½ weeks).

**Dates:** **Version 1:** October 1973—February 1981.
**Version 2:** March 1981—Present.

**Objective:** To provide participants with a basic understanding of computers, with basic and advanced concepts of COBOL programming, and with COBOL programming practice.

**Instruction:** Introduction to concepts of computer hardware and software; structured programming; table handling; debugging; basic JCL; ISAM and VSAM data structures. Participants are *not* required to design programs, only to interpret pseudo-code.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 12 semester hours in Computer Technology or Data Processing (10/79). NOTE: This course may fulfill the requirements of an introductory programming course and an introductory language course at the graduate level. In this case, 8 semester hours of graduate credit in Data Processing are recommended.

### INTERCOMM Workshop (L401)

Refer to IBM Information Management System (IMS/VS) Data Communications.

### Introduction to Teleprocessing and the Dataspeed 40 (L395)

Refer to IBM Information Management System (IMS/VS) Data Communications.

### Introduction to Teleprocessing and the 3270 Information Display System (L395)

Refer to IBM Information Management System (IMS/VS) Data Communications.

### Linkage Editor (L030)

Refer to IBM OS JCL and Utilities.

### OS/370 JCL (L108)

Refer to IBM OS JCL and Utilities.

### OS/VS2 Concepts (L150)

Refer to IBM OS JCL and Utilities.

### Project Management (Y300)

Refer to Systems Analysis and Design.

### Systems Analysis and Design

### 1. Total Systems Development Concepts (Y120)

### 2. Project Management (Y300)

### 3. Consideration for Physical Data Design (L760)

**Location:** Various AT&T Long Lines data centers throughout the United States.

**Length:** 1. 18 hours (1 week).
2. 28 hours (1 week).
3. 35 hours (1 week).

**Dates:** 1. August 1973—Present.
2. January 1973—Present.
3. January 1973—Present.

**Objective:** To provide participants with the fundamental concepts of systems analysis and design, project management, and data design.

**Instruction:** **Course 1:** Using standard terminology to describe the Total System Development process; identifying and knowing when to apply the various specialized technical skills that may be required to support a systems development effort. (Prerequisite: Initial Programmer Training L001.) **Course 2:** Application of a systems approach to project planning and control, including PERT/CPM and general network theory and techniques. (Prerequisite: Total Systems Development Concepts Y120.) **Course 3:** Choosing file organization and access methods; media and backup/recovery techniques; calculating storage space and I/O timings; overview of data base concepts. (Prerequisite: Total Systems Development Concepts Y120.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 6 semester hours in Computer Technology or Data Processing (10/79). NOTE: Courses 1, 2, and 3 must all be completed to receive full credit. If only Courses 1 and 2 are completed, 3 semester hours are recommended.

### Total Systems Development Concepts (Y120)

Refer to Systems Analysis and Design.

### TSO (L020)

**Location:** Various AT&T Long Lines data centers throughout the United States.

**Length:** 21 hours (3 days).

**Dates:** January 1973—April 1981.

**Objective:** To provide participants with the skills and experiences necessary to write and run programs in an interactive environment.

**Instruction:** Entering and manipulating data from the terminal; developing, compiling, and executing interactive programs; writing and executing TSO procedures. (Prerequisite: Initial Programmer Training L001.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Computer Technology or Data Processing (10/79).

# AMF, INCORPORATED

AMF, Incorporated, headquartered in White Plains, New York, is a worldwide producer of industrial and leisure-time products. A highly diversified company, AMF has business units throughout the world, and employs 33,000 persons.

The AMF Corporate Employee Development Department helps to ensure sound management by offering courses designed to increase employees' ability to do their present jobs and to prepare them for future responsibilities. Training is provided at individual business unit locations.

Source of official student records: Director, Employee Development, AMF, Incorporated, 777 Westchester Avenue, White Plains, New York 10604.

## Accounting and Finance for Non-Financial Managers

**Location:** AMF, Incorporated, White Plains, NY.

**Length:** 36 hours (2 weeks).

**Dates:** April 1979—June 1981.

**Objective:** To familiarize non-financial managers with the basic precepts of finance and accounting.

**Instruction:** Financial statements; financial statement analysis; managerial aspects; cash flow analysis; return on investment; capital budget.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting (6/79).

# ARNOT-OGDEN MEMORIAL HOSPITAL

Arnot-Ogden Memorial Hospital is a voluntary, nonprofit hospital located in Elmira, New York. The hospital has the skilled personnel and equipment to provide not only the standard hospital services, but also specialty services unusual in a community hospital. Arnot-Ogden is the center for kidney dialysis and radiation therapy for a wide geographic area. Its neonatal intensive care unit cares for critically ill babies from a nine-county area. The hospital has an extensive cardiac program, including open-heart surgery, and a CT scanner provides a valuable addition to the diagnostic capabilities of the hospital.

## SCHOOL OF RADIOLOGIC TECHNOLOGY

The School of Radiologic Technology was established in 1953 to provide an educational and work opportunity for the community.

The Radiologic Technology Program is a 24-month program of classroom and practical instruction. Its main objectives are to educate the student to properly use radiation in the health field, to enable graduates to practice radiologic technology with a high level of competence, and to meet the professional standards set by the American Registry of Radiologic Technologists and the New York State Department of Health, Bureau of Radiologic Technology. During the two years, students attend classes, participate in laboratory sessions, and receive clinical experience in the hospital's radiology department. The students also take an 8-semester-hour course in anatomy and physiology which is taught by Elmira College faculty. This course is taught on the college campus, and the students are welcome to use all the college facilities.

Source of official student records: Director of Education, School of Radiologic Technology, Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, New York 14901.

### Clinical Practicum I, II, III, and IV

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** Minimum of 2,200 hours (2 years).

**Dates:** September 1974–Present.

**Objective:** To allow the student to obtain experience in the practice of radiological technology in a controlled clinical setting.

**Instruction:** Students function as learning members of the hospital's radiology department. Experience is provided in patient preparation, selection of proper techniques for radiographic analysis, and administration of ionizing radiation for the purpose of diagnostic examination with appropriate radiation protection control. Close supervision is provided to develop and evaluate the student's clinical skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 12 semester hours in Allied Health Sciences or Radiography (12/80). NOTE: Parts I, II, III, and IV must all be completed to receive credit.

### Introduction to Radiologic Technology and Medical Ethics

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 15 hours (10 weeks).

**Dates:** September 1974–Present.

**Objective:** To provide the student with an introduction to the field of radiography.

**Instruction:** History of radiography; ethics; medicolegal considerations; interpersonal relationships.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences or Radiography (12/80).

### Medical and Surgical Diseases

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 20 hours (13 weeks).

**Dates:** September 1974–Present.

**Objective:** To provide the student with an understanding of the effect on radiographic technique of changes that occur in disease and injury.

**Instruction:** Principles used in the identification of circulatory, degenerative, and neoplastic diseases; conditions of illness involving the systems of the body, with stress on radiographic technology.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences (12/80).

### Medical Terminology

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 32 hours (29 weeks).

**Dates:** September 1974–Present.

**Objective:** To provide the student with an understanding of medical terminology, and the ability to interpret and define medical terms.

**Instruction:** Introduction to medical terminology: combining forms; plurals of medical terms; pronunciation; general terms used in radiology; abbreviations; medical terms by body system.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences (12/80).

## Methods of Patient Care

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 43 hours (26 weeks).

**Dates:** February 1979—Present.

**Objective:** To provide the student with an understanding of the proper methods of assisting and moving the patient, basic first aid procedures, aseptic techniques, contrast media, and management of the seriously ill or injured patient.

**Instruction:** Body mechanics; aseptic techniques; management of the seriously ill or injured patient (acute abdomen, fractures, and dislocations); patient reaction to iodinated contrast media; the emergency tray/cart; basic first aid; nursing procedures pertinent to radiology (anesthesia, operating room radiography, bedside radiography, and handling patients with communicable diseases). Contrast media: basic forms; precautionary steps in preparation and administration; patient preparation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences (12/80).

## Nuclear Medicine

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 44 hours (20 weeks); includes 24 hours of laboratory work.

**Dates:** September 1974—Present.

**Objective:** To provide the student with an understanding of the basic principles of nuclear medicine, including radiation detection and instrumentation as they apply to nuclear medicine.

**Instruction:** Natural and artificial radioactivity; methods of producing isotopes; physical characteristics of isotopes, including radioactive decay, half life, and tracers; measurement and counting of radioisotopes; clinical applications of radioisotopes; image detectors; areas of operation in nuclear medicine; isotopes in treatment; energy range classification; radiation safety in nuclear medicine.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Allied Health Sciences or Nuclear Medicine (12/80).

## Pediatric Radiography

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 15 hours (15 weeks).

**Dates:** September 1974—Present.

**Objective:** To enable the student to identify and utilize the correct procedures related to radiographing children.

**Instruction:** Introduction to pediatric radiography; pediatric behavior; anatomical proportions; common problems in pediatric radiography; pediatric radiation protection; equipment, accessories, and immobilization of the pediatric patient; handling the neonate.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences or Radiography (12/80).

## 1. Principles of Radiographic Exposure I
## 2. Principles of Radiographic Exposure II

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 1. 48 hours (39 weeks).
2. 15 hours (13 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide the student with an understanding of the principles involved in the formation of the latent radiographic image and their application to different situations.

**Instruction: Course 1:** Definitions; characteristics of X-rays; formation of the latent image; intensifying and fluoroscopic screens; prime factors of radiographic exposure; factors controlling and affecting radiographic quality; beam restricting devices (collimators, cones, cylinders, and diaphragms); filters; grids; stereoscopy; conditions influencing choice of chart; kilovoltage and milliamperage; review of grid conversion factors; review of screen conversion factors; kilovoltage distance conversion factors; use of higher kilovoltages; demonstration of radiographic experiments. **Course 2:** Sensitometric properties of X-ray film; terminology; the electromagnetic spectrum; characteristic curve.

**Credit recommendation: Course 1:** In the lower division baccalaureate/ associate degree category, 4 semester hours in Allied Health Sciences or Radiography (12/80). **Course 2:** In the lower division baccalaureate/ associate degree category, 1 semester hour in Allied Health Sciences or Radiography (12/80).

## Quality Assurance

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 15 hours (6 weeks); includes 12 hours of laboratory work.

**Dates:** June 1980—Present.

**Objective:** To enable the student to carry out a quality assurance program in diagnostic radiology.

**Instruction:** Quality assurance instrumentation to determine kilovoltage, milliampere-seconds, reciprocity, focal spot size, and X-ray field-light field coincidence. Use of an ionization chamber survey instrument to determine half-value layer radiation exposure, milliampere-seconds, reciprocity, and scatter radiation distribution.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences or Radiography (12/80).

### 1. Radiation Biology
### 2. Radiation Protection

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 1. 20 hours (13 weeks).
2. 22 hours (22 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide the student with a knowledge of elementary pathology as it relates to radiotherapy and radiation biology, and the effects of ionizing radiation on biological systems; to enable the student to understand ionizing radiation and the need for protective measures and maximum safety precautions in radiography.

**Instruction:** Elementary pathology; radiation and tumors; treatment planning; short-term effects of ionizing radiation; long-term somatic effects of ionizing radiation; biological effects of ionizing radiation; radiation effects of mitosis; oxygen effect. Radiation units of measurement; interactions of radiation with matter; maximum permissible dose; principles of safety; introduction to radiation detection instruments; protective barriers; ionizing radiation and public health.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Allied Health Sciences (12/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Radiation Physics

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 60 hours (39 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide the student with a knowledge of the general theories of physics as they apply to radiation physics.

**Instruction:** Fundamentals of mathematics. Radiological physics: fundamental units; derived units; mechanics; atomic structure of matter; electrostatics; magnetism; electrodynamics; electromagnetism; transformers; X-ray tubes; roentgen rays; interaction of radiation and matter; X-ray circuits and equipment; production and properties of X-rays. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Allied Health Sciences or Radiation Physics (12/80).

### Radiation Protection

Refer to Radiation Biology.

### 1. Radiographic Film Evaluation I
### 2. Radiographic Film Evaluation II
### (Film Critique)

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 1. 40 hours (40 weeks).
2. 40 hours (40 weeks).

**Dates:** September 1980—Present.

**Objective:** To enable the student to evaluate and improve the diagnostic quality of a radiograph.

**Instruction:** Patient profile, pathology, and condition during radiographic examination; technical factors and focus-film distance; collimation and shielding; positioning; anatomy; radiographic quality.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Radiography (12/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

### 1. Radiographic Procedures I
### 2. Radiographic Procedures II
### (Radiographic Anatomy and Positioning)

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 1. 167 hours (44 weeks); includes 80 hours of laboratory work.
2. 87 hours (39 weeks); includes 41 hours of laboratory work.

**Dates:** September 1974—Present.

**Objective:** To provide the student with knowledge of the structure and function of the human body, with emphasis on radiographic aspects; to enable the student to identify and utilize the correct procedures in positioning patients for radiography.

**Instruction: Course 1:** General positioning: contrast studies; upper and lower extremities; vertebral column; thorax; abdomen; pelvis. **Course 2:** Skull radiography: sinuses; facial bones; orbit and eye; nasocrimal drainage; mouth; miscellaneous, including temporal styloid, jugular foramina, and hypoglossal canal. Female reproductive system: fetography; placentography; pelvimetry.

**Credit recommendation: Course 1:** In the lower division baccalaureate/ associate degree category, 5 semester hours in Allied Health Sciences or Radiography (12/80). **Course 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Radiography (12/80).

## Radiographic Processing

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 36 hours (26 weeks); includes 10 hours of laboratory work.

**Dates:** September 1974 – Present.

**Objective:** To enable the student to develop the knowledge and skills necessary to perform appropriate darkroom procedures, to identify the chemical constituents of processing solutions and their functions, and to evaluate radiographic film characteristics.

**Instruction:** Darkroom procedures and chemical constituents and functions of processing solutions. Processing room design and function; photographic process; manual processing (the developer, rinsing, fixer, washing, and drying); preparation of solutions; automatic processing; radiographic film artifacts and their causes; silver reclamation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences or Radiography (12/80).

## Special Procedures

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 44 hours (39 weeks).

**Dates:** September 1974 – Present.

**Objective:** To provide the student with a knowledge of the supplementary procedures used in advanced technology and related radiographic equipment.

**Instruction:** Design and function of radiographic equipment used for special procedures: high output generators; special tables; rapid film changers; pressure injectors; catheters. Supplementary procedures: tomography; stereo radiography; direct enlargement radiography; thermography; xeroradiography; ultrasonography. Specific radiographic procedures. Imaging.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Radiography (12/80).

## Topographic Anatomy

**Location:** Arnot-Ogden Memorial Hospital, Roe Avenue, Elmira, NY.

**Length:** 15 hours (13 weeks).

**Dates:** September 1974 – Present.

**Objective:** To provide the student with an understanding of topographic anatomy as applied to radiography.

**Instruction:** A study of topographic anatomy, the relationship of organs to each other, and the location of organs using surface landmarks. Upper and lower extremities; neck; chest; abdominal and pelvic cavities; head. Radiographic film evaluation to identify topographic anatomic structures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences, Biology, or Radiography (12/80).

80

# ARTHUR ANDERSEN & CO.

Arthur Andersen & Co. is a worldwide firm of independent auditors and accountants. The operations of the Firm include 60 operating offices in the United States and Puerto Rico, and 65 offices located in 37 other countries, in which there are more than 1,100 partners and 13,000 professional employees.

The Firm conducts diverse technical training required for the professional development of personnel of the Firm in the audit, tax, and administrative services divisions of its practice, as well as for the development of technical competence in dealing with problems unique to specialized industries. The courses include such topics as accounting and auditing, taxation, managerial skills development, reporting to regulatory bodies, and highly technical instruction on computers and systems installation. All personnel, from newly employed staff to experienced partners, participate in these courses at levels of complexity commensurate with their responsibilities, experience, and needs. Approximately half of the training is conducted in the operating offices, primarily using centrally-prepared course material, and the balance at the Firm's Center for Professional Education in St. Charles, Illinois.

Source of official student records: Managing Director, General Practice Education, Arthur Andersen & Co., Center for Professional Education, 1405 North Fifth Avenue, St. Charles, Illinois 60174.

## Firmwide Audit Staff Training School (FASTS)

**Location:** Center for Professional Education, St. Charles, IL.

**Length:** 110 hours (3 weeks); 4 days preparation in local office followed by 11 days in residence, plus approximately 35 hours of outside reading and problem assignments.

**Dates:** August 1975—June 1981.

**Objective:** To teach new staff members the practical application of the procedural aspects of auditing, documentation of audit work done, and derivation of resultant audit conclusions.

**Instruction:** A complete audit for a medium-sized manufacturing firm that employs standard costing of inventories, using a practice set containing computer-prepared books, records, and documents, and the use of random selection of transactions for examination. Case study problems range from preparation of working trial balances to drafting of the auditors' report and financial statements, and emphasize the usual duties and responsibilities of a first-year staff accountant. These include: preparation of audit working papers and analyses of accounts; review, evaluation, and testing of internal control; and performance of basic audit procedures and techniques, in accordance with written audit program instructions.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Auditing (6/76).

## Integration of Intermediate and Advanced Accounting with Auditing

**(Formerly Intermediate Accounting Course)**

**Location:** University of Illinois, Urbana, IL.

**Length:** 215 hours (5 weeks); residential, approximately 136 hours of outside reading and problem assignments.

**Dates:** July 1972—June 1981.

**Objective:** To teach a knowledge of accounting concepts and uses of financial statements and reports to new staff members who have completed only basic college accounting courses.

**Instruction:** Instruction covers the normal academic accounting curriculum ranging from elementary through advanced courses. Accounting concepts and principles; financial statement preparation and analysis; nature of auditing; the collection of evidence in auditing; professional ethics; accounting for cash, receivables, inventories, investments, plant and equipment, intangibles, liabilities, and corporate capital; cost and managerial accounting; accounting for partnerships; accounting errors and their correction; statement of changes in financial position; statements from incomplete data; statements adjusted for changes in price levels; business consolidations. The course includes lectures, case studies, problem solving, and homework assignments.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Auditing Theory, 4 semester hours in Intermediate Accounting, and 3 semester hours in Advanced Accounting (6/76).

# BERNARD FINESON DEVELOPMENTAL CENTER

Bernard Fineson Developmental Center, a unit of the New York State Office of Mental Retardation and Developmental Disabilities consists of three facilities located in the Borough of Queens, New York City. The Center is responsible for providing care for mentally retarded individuals of all ages, etiologies, and degrees of mental retardation in both residential and day care programs.

In an effort to emphasize the humanizing, developmental, and educational, rather than the custodial, aspects of the treatment of the mentally retarded, the Education and Training Department conducts a variety of courses aimed at developing professional expertise. The courses are open to professional and paraprofessional Developmental Center staff, foster parents, community agency personnel, special education teachers, college students, health care providers, and volunteers.

Source of official student records: Director of Education and Training, Bernard Fineson Developmental Center, Howard Park Unit, 155-55 Cross Bay Boulevard, Howard Beach, New York 11414.

### Activities of Daily Living (7)

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** November 1975—June 1981.

**Objective:** To demonstrate techniques for training severely and profoundly mentally retarded individuals in daily living activities.

**Instruction:** Demonstration and practical application of the activities of daily living. Self-feeding; dressing; toilet training; communication skills; safety and mobility skills; household activities.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Behavioral Science or Education (4/76).

### Behavior Modification for Professionals (9)

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** February 1976—June 1981.

**Objective:** To provide professional staff with the knowledge of behavior modification theory and methodology needed to develop and supervise behavior modification programs.

**Instruction:** Review of history, philosophy, principles, and measurement; theory of behavior change; alternative strategies; special theories of self-control, reciprocal inhibition, token economies, and "emotional messages"; program implementation and supervision.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Behavioral Science, Education, or Psychology (4/76).

### Behavior Modification Techniques (6)

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** November 1975—June 1981.

**Objective:** To provide an introduction to theories and practices of behavior modification.

**Instruction:** Defining, measuring, changing, and maintaining behavior; specific techniques for teaching new behaviors.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Behavioral Science, Education, Psychology, or Sociology (4/76).

### Behavior Therapy (10)

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** October 1975—June 1981.

**Objective:** To provide an introduction to the theory and practice of behavior therapy.

**Instruction:** Theory of, and practices in, behavior therapy. Thought stoppage; evaluation; conceptualization; relaxation techniques; desensitization; assertive training.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Behavioral Science or Psychology (4/76).

### The Cerebral Palsied Mentally Retarded and Physically Handicapped Individual (3)

Refer to Habilitation of the Cerebral Palsied Mentally Retarded and Physically Handicapped Individual (3).

### Community Living for Retarded Adults (8)

**(Formerly Preparation in Community Living for Retarded Adults [8])**

**Location:** Corona Unit, Corona, NY; Glen Oaks

Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** February 1976—June 1981.

**Objective:** To explore practical problems involving the emotional, intellectual, social, and physical needs of mentally retarded adolescents and adults.

**Instruction:** Health problems; adolescent problems; education and training; the retarded adult in society; community resources; living arrangements; adult sexuality; a view of the future.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavioral Science, Education, Psychology, or Sociology (4/76).

## Current Theory in Severe and Profound Mental Retardation: Survey for Professionals (2)

**(Formerly Current Theory in the Disorder of the Severe and Profound Mentally Retarded Individual [2])**

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** February 1976—June 1981.

**Objective:** To provide a survey of current knowledge of mental retardation, including physical, social, and emotional aspects.

**Instruction:** History of mental retardation; definition of terms; etiology of mental retardation; labor and delivery; normal developmental milestones; neurologic examinations; neuropsychologic assessment; behavior modification; learning disabilities; seizures; common orthopedic problems; impact of mental retardation on the family.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavioral Science (4/76).

## Current Theory in the Disorder of the Severe and Profound Mentally Retarded Individual (2)

Refer to Current Theory in Severe and Profound Mental Retardation: Survey for Professionals (2).

## Habilitation of the Cerebral Palsied Mentally Retarded and Physically Handicapped Individual (3)

**(Formerly The Cerebral Palsied Mentally Retarded and Physically Handicapped Individual [3])**

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** February 1976—June 1981.

**Objective:** To provide a knowledge of the developmental approach to physical habilitation and communication skills.

**Instruction:** The developmental approach to the physical habilitation, sensory stimulation, and communication skills of severely and profoundly mentally retarded, physically handicapped individuals. Skills taught include techniques of handling, positioning, ambulation, adaptive equipment, sensory stimulation, and language therapy. Emphasis is on experiential and demonstrative training.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Behavioral Science or Education (4/76).

## The Interdisciplinary Treatment Plan for Direct Care Personnel Working With the Severely and Profoundly Mentally Retarded Client (4)

Refer to The Interdisciplinary Treatment Plan for Direct Care Personnel Working With the Severely and Profoundly Retarded Individual (4).

## The Interdisciplinary Treatment Plan for Direct Care Personnel Working With the Severely and Profoundly Retarded Individual (4)

**(Formerly The Interdisciplinary Treatment Plan for Direct Care Personnel Working With the Severely and Profoundly Mentally Retarded Client [4])**

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** February 1976—June 1981.

**Objective:** To provide direct care trainees with an overview of the functions of the interdisciplinary team.

**Instruction:** The role of each discipline as a specialization and the cooperative integration of discipline functions to provide an individualized treatment plan for the client. The competencies surveyed include occupational therapy, physical therapy, neurodevelopmental feeding, communication skills, recreation, movement therapy, social work, psychology, and medicine relevant to the severely and profoundly mentally retarded individual.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Behavioral Science (4/76).

### The Interdisciplinary Treatment Plan: Overview for Professionals of Current Approaches in the Interdisciplinary Management of Severely and Profoundly Mentally Retarded Individuals (5)

Refer to The Interdisciplinary Treatment Team: Overview for Professionals of Current Approaches in the Interdisciplinary Management of Severely and Profoundly Mentally Retarded Individuals (5).

### The Interdisciplinary Treatment Team: Overview for Professionals of Current Approaches in the Interdisciplinary Management of Severely and Profoundly Mentally Retarded Individuals (5)

**(Formerly The Interdisciplinary Treatment Plan: Overview for Professionals of Current Approaches in the Interdisciplinary Management of Severely and Profoundly Mentally Retarded Individuals [5])**

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** February 1976–June 1981.

**Objective:** To provide health care professionals and special educators with knowledge of contemporary approaches to the treatment of the severely and profoundly mentally retarded client.

**Instruction:** Theoretical principles and practices used by supervisors of interdisciplinary teams. Occupational therapy; physical therapy; feeding; communication skills; movement therapy; nursing; psychology; social work; medicine.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavioral Science (4/76).

### Introduction to Therapeutic Recreation–Field Practicum

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 26 hours (16 weeks).

**Dates:** June 1978–June 1981.

**Objective:** To introduce direct care personnel to the practice of therapeutic recreation.

**Instruction:** The development and use of recreational activities and strategies for the profoundly retarded.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Human Services, Recreation, or Social Work (10/79).

### Preparation in Community Living for Retarded Adults (8)

Refer to Community Living for Retarded Adults (8).

### The Pre-School Mentally Retarded Child (1)

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 30 hours (15 weeks).

**Dates:** February 1976–June 1981.

**Objective:** To provide knowledge of the developmental processes in the moderately to severely mentally retarded pre-school child.

**Instruction:** Normal development, abnormal development, and developmental learning from infancy to age six. Definitions of mental retardation; common syndromes; growth and development milestones; the learning process; client evaluation and case history reviews; early intervention programs; cognitive and perceptual skills; teaching skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Behavioral Science or Education (4/76).

### Seminar for Family Caretakers

**Location:** Corona Unit, Corona, NY; Glen Oaks Unit, Creedmoor State Hospital, Queens Village, NY; Howard Park Unit, Howard Beach, NY.

**Length:** 16 hours (8 weeks).

**Dates:** April 1977–June 1981.

**Objective:** To provide course participants with an overview of the nature and needs of retarded persons in the community.

**Instruction:** The nature of mental retardation; effects of institutionalization and normalization; strategies for modifying behavior; medical and recreational needs of the retarded; sexuality and the retarded.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Human Services, Mental Retardation, or Social Sciences (10/79).

### Training for Professional Staff

**Location:** Howard Park Unit, Howard Beach, NY.

**Length:** 40 hours (1 week).

**Dates:** May 1978–June 1981.

**Objective:** To provide course participants with the knowledge and skills necessary to meet the specific needs of developmentally disabled individuals, and to orient participants to the philosophy and goals of the developmental center.

**Instruction:** Orientation to interdisciplinary treatment team and group process; goal planning; task analysis; introduction to medications; client abuse; seizures; resuscitation and CPR; positioning; developmental feeding; crisis intervention and use of restraints.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Human Services, Mental Retardation, or Social Sciences (10/79).

# BIOLOGICAL PHOTOGRAPHIC ASSOCIATION, INC.

The Biological Photographic Association, Inc. is an international organization of over 1,200 scientific photographers whose purpose is to further the study and application of photography in relation to biological sciences, to promote higher standards in methods and research, and to serve its members in advancing their professional competence. The Association sponsors and maintains a certification program to set and determine educational, ethical, and specialization standards for practitioners in the field of biological photography. It implements this program through a Board of Registry which issues certification to any candidate found qualified.

The certification program involves self- and group-study in biological photography with built-in systems of feedback from regional and board advisors. A comprehensive three-phase examination measures an applicant's theoretical knowledge, practical skills, and professionalism. The program certifies performance and potential over the broad scope of categories representative of bio-photographic activity.

Source of official student records: Executive Director, Biological Photographic Association, Inc., Box 2603 West Durham Station, Durham, North Carolina 27705.

## Certification Program for Registered Biological Photographers

**Location:** Independent study.

**Length:** Independent study.

**Dates:** June 1968—Present.

**Objective:** To measure and certify knowledge, skills, and performance in biological photography.

**Instruction:** Students must pass a four-hour written examination designed to test basic and specialized theoretical knowledge of the following topics: light theory; photographic optics and chemistry; appropriate camera and light techniques; photomicrography; cinematography; videography; planning and production. A portfolio of satisfactory assignments must then be submitted in these required topics: photomicrography; photomacrography; preparation of a journal or oral paper; preproduction planning; production in a motion media; photography of glassware, various specimens, and cultures; graphic illustrative techniques; infrared and ultraviolet techniques; portraiture; various copy techniques; sequential photography. Twelve or more elective assignments are also submitted so that the candidate may work in his/her speciality, such as television, cinematography, or ophthalmology. The final step in the certification process is an oral examination at which the student gives a presentation on his/her particular specialization, photographic research, theory, or administration, and is questioned on his/her written and practical examinations. (Prerequisite: A student must have at least five years of varied biophotographic education, training, or experience before completion of the program and certification.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 40 semester hours in Biological Photography (6/78). NOTE: It is recommended that a college ask a student to submit his/her portfolio for review at the time it is considering granting credit for successful completion of the certification program.

# BLUE CROSS AND BLUE SHIELD OF GREATER NEW YORK

Blue Cross and Blue Shield of Greater New York is a nonprofit health service corporation serving the health needs of nearly nine million subscribers in the 17-county New York City metropolitan area.

The Data Processing Education Department provides technical training in programming, systems analysis, and other data processing-related skills to members of the corporation's large data processing facility. The Department is staffed by an administrator, two full-time instructors and a librarian. Courses are conducted during normal working hours at the corporate headquarters in New York City.

Source of official student records: Data Processing Education Center, Blue Cross and Blue Shield of Greater New York, 622 Third Avenue, New York, New York 10017.

## Assembly Programming (DP04)

**(Formerly BAL [DP04])**

**Location:** 622 Third Avenue, New York, NY.

**Length:** 150 hours (5 weeks).

**Dates:** June 1978—Present.

**Objective:** To provide the knowledge and skills necessary to become Assembly programmers and an introduction to systems programming.

**Instruction:** Introduction to Assembly programming; advanced Assembly programming, including floating-point and decimal arithmetic and macros. Student completes five machine problems. (Prerequisite: Introduction to Data Processing, and programming experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 6 semester hours in Electronic Data Processing; or in the graduate degree category, 3 semester hours in Electronic Data Processing (8/77).

## BAL (DP04)

**Location:** 622 Third Avenue, New York, NY.

**Length:** 150 hours (5 weeks).

**Dates:** January 1977—June 1978.

**Objective:** To provide the knowledge and skills necessary to become BAL programmers, and an introduction to systems programming.

**Instruction:** Introduction to BAL; advanced BAL programming, including floating-point and decimal arithmetic and macros. Student completes five machine problems. (Prerequisite: Introduction to Data Processing, and programming experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 6 semester hours in Electronic Data Processing; or in the graduate degree category, 3 semester hours in Electronic Data Processing (8/77).

## COBOL Progamming (DP01)

**Location:** 622 Third Avenue, New York, NY.

**Length:** 180 hours (6 weeks).

**Dates:** January 1977—Present.

**Objective:** To provide the knowledge and skills necessary to become COBOL programmers, from elementary COBOL programming to file maintenance and update procedures.

**Instruction:** Simple ANSI COBOL programming; sequential, ISAM, and direct file processing; debugging; table handling; SORT and string statements. Coverage of TOTAL and PANVALET. Students write, compile, and execute five programs. (Prerequisite: Introduction to Data Processing, or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 6 semester hours in Electronic Data Processing; or in the graduate degree category, 3 semester hours in Electronic Data Processing (8/77).

## MVS Dumps and Debugging (DP03)

**(Formerly OS/VS Dumps and Debugging [DP03])**

**Location:** 622 Third Avenue, New York, NY.

**Length:** 30 hours (1 week).

**Dates:** January 1977—Present.

**Objective:** To provide the student with the knowledge needed to understand dumps and the skill necessary to debug most abends.

**Instruction:** Storage dump concepts; types of storage dumps, including SOC1-7 Abends; storage dump format; internal and external abends; debugging procedures, including BAL debugging. (Prerequisite: Introduction to Data Processing and OS JCL Utilities, or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Electronic Data Processing (8/77).

## MVS JCL and Utilities (DP02)

**(Formerly OS JCL and Utilities [DP02])**

**Location:** 622 Third Avenue, New York, NY.

**Length: Version 1:** 60 hours (2 weeks).

**Version 2:** 90 hours (3 weeks).

**Dates:** **Version 1:** January 1977—June 1978.
**Version 2:** June 1978—Present.

**Objective:** To provide the student with the ability to communicate with the operating system via job control language and commonly used IBM utilities.

**Instruction: Version 1** and **Version 2:** The seven JCL statements; cataloged procedures; IEFBR14; IEBGENER; IEHPROGH; IEHLIST; IEBPTPCH; IEBUPTE; IEHMOVE. Student must complete four JCL problems. (Prerequisite: Introduction to Data Processing, or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Electronic Data Processing (8/77).

## OS JCL and Utilities (DP02)

Refer to MVS JCL and Utilities (DP02).

## OS/VS Dumps and Debugging (DP03)

Refer to MVS Dumps and Debugging (DP03).

93

# BOOTH MEMORIAL MEDICAL CENTER

Booth Memorial Medical Center, located in Queens, New York, is a 400-bed voluntary medical facility owned and operated by the Salvation Army. It offers a wide range of diagnostic and treatment services, has a full teaching affiliation with New York University Medical Center, and has eight approved residency programs. In addition, many departments offer clinical training for students through university affiliations.

Employee training and development is provided through the Nursing Inservice Education Department, the Personnel Department, and on an individual departmental basis. Orientation, counseling and referrals, management development, and programs to develop specific job skills and potential capabilities are provided.

Source of official student records: Personnel Department, Booth Memorial Medical Center, 56-45 Main Street, Flushing, New York 11355.

## Management Development for Department Heads and Supervisors

**Location:** Booth Memorial Medical Center, Flushing, NY.

**Length:** 37½ hours (7 weeks).

**Dates:** October 1977 – June 1981.

**Objective:** To familiarize participants with the basic principles and techniques of management.

**Instruction:** Planning; policy formulation; communication and coordination; problem solving and decision making; delegation; managing time effectively; morale and organizational "climate." The course format includes lecture, discussion, role-play exercises, case study analyses, and individual written assignments.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Basic Management (10/78).

# BROOME DEVELOPMENTAL SERVICES

Broome Developmental Services, a unit of the New York State Office of Mental Retardation and Developmental Disabilities, was established in 1974 to provide comprehensive services for the mentally retarded of all ages in the counties of Broome, Chenango, Delaware, Otsego, Tioga, and Tompkins. The Center's staff provide a wide range of habilitative and educational services to the 400 residents who live at the Center in home-like living units. Community services staff also provide comprehensive services to over 600 clients living in family-care homes and to over 300 outpatients in the catchment area.

Within the Center, the Education and Training Department provides educational programs to the entire staff of the facility.

Source of official student records: Director of Education and Training, Broome Developmental Services, Glenwood Road, Binghamton, New York 13905.

## Administration of Medications

**Location:** Broome Developmental Services, Binghamton, NY.

**Length:** 30 hours (3 weeks).

**Dates:** March 1978–June 1981.

**Objective:** To provide paraprofessionals with the knowledge and skills necessary to administer medications safely, including knowledge of therapeutic and side effects of commonly used drugs.

**Instruction:** Brief overview of body systems; competency-based instruction in legal issues, pharmacotherapeutics, administration and recording of medications, apothecary and metric systems of measurement, abbreviations, use of standard reference books.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Nursing Sciences (10/79).

## Nature and Needs of the Mentally Retarded (Nature, Needs, and Care of the Mentally Retarded)

**Location:** Broome Developmental Services, Binghamton, NY.

**Length:** 68 hours (3 weeks); includes 8 hours of supervised practicum.

**Dates:** March 1978–June 1981.

**Objective:** To provide the course participant with an overview of etiology, treatment, and care of mentally retarded individuals in institutions.

**Instruction:** Etiology of mental retardation; physical, functional, and psychological impairments frequently associated with retardation; care of mentally retarded persons; development and implementation of treatment goals with mentally retarded individuals.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Human Services, Mental Retardation, or Social Services (10/79).

# CENTER FOR HUMAN SERVICES TRAINING, INC.

The Center for Human Services Training, under its contract with the Erie County Department of Mental Health, operates the Community Mental Health Manpower Development Project. The Center provides both training and manpower technical assistance services to the mental health service delivery system of Erie County. Under this program, the Center is responsible for the certification of community mental health workers at various levels of the Erie County Civil Service career ladder. This certification is obtained by an individual's successful completion of various core (essential) modules or courses plus speciality modules. In addition, trainees must successfully complete yearlong fieldwork assignments under the supervision of agency staff coordinated by Center staff.

Source of official student records: Manpower Office, Erie County Department of Mental Health, 95 Franklin Street, Buffalo, New York 14202.

## Approaches to Problem Solving (210)

Refer to Introduction to Mental Health Services.

## Community Resources (207)

Refer to Introduction to Mental Health Services.

## Introduction to Community Mental Health (203)

Refer to Introduction to Mental Health Services.

## Introduction to Crisis Intervention (204)

Refer to Introduction to Mental Health Services.

## Introduction to Group Work (205)

Refer to Introduction to the Human Services.

## Introduction to Interviewing (201)

Refer to Introduction to the Human Services.

## Introduction to Mental Health Services

1. **Introduction to Community Mental Health (203)**
2. **Introduction to Crisis Intervention (204)**
3. **Community Resources (207)**
4. **Approaches to Problem Solving (210)**

**Location:** Center classrooms, 170 Franklin Street, Buffalo, NY.

**Length:** 1. 24 hours (12 weeks).
2. 14 hours (2 days).
3. 16 hours (8 weeks).
4. 30 hours (15 weeks).

**Dates:** September 1974—December 1976.

**Objective:** To provide the student with an introduction to the mental health system and the helping role.

**Instruction:** Introduction to mental health services consisting of four modules: introduction to basic concepts of community mental health, issues of professionalism; a two-day workshop focusing on the theory and techniques of crisis intervention; orientation to major mental health and human service agencies in the geographic area and techniques of client expediting; approaches to problem solving explored primarily through the use of case studies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Mental Health (11/75). NOTE: Courses 1, 2, 3, and 4 must all be completed to receive credit.

## Introduction to the Human Services

1. **Introduction to Interviewing (201)**
2. **Introduction to Group Work (205)**
3. **Life-Span Development (208)**
4. **Perspectives on Ethnicity (218)**

**Location:** Center classrooms, 170 Franklin Street, Buffalo, NY.

**Length:** 1. 22 hours (11 weeks).
2. 18 hours (9 weeks).
3. 14 hours (7 weeks).
4. 18 hours (9 weeks).

**Dates:** September 1974—December 1976.

**Objective:** To provide the student with the basic skills necessary for self-understanding and the understanding of interpersonal relations in preparation for working in the human services.

**Instruction:** Introduction to the human services consisting of four modules: introduction to interviewing; basic techniques of group work (theory, processes, and methods of working effectively with various kinds of groups); Erikson's life-span development; perspectives on ethnic groups. Use of both lectures and group exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Human Services (11/75). NOTE: Courses 1, 2, 3, and 4 must all be completed to receive credit.

## Life-Span Development (208)

Refer to Introduction to the Human Services.

## Perspectives on Ethnicity (218)

Refer to Introduction to the Human Services.

# CENTRAL ISLIP PSYCHIATRIC CENTER

Established in 1888, Central Islip Psychiatric Center provides the population of Suffolk County with a wide range of psychiatric services. The facility offers inpatient treatment to more than 2,000 clients, and provides outpatient activities such as day hospitals, community support programs, case management, and crisis residence services for a population of approximately 3,000 clients.

It is the goal of the Education Unit to assist in the ongoing effort to provide the highest level of health care for the clients served by the facility. A variety of training programs and other educational services are available to all employees.

Source of official student records: Director of Education and Training, Central Islip Psychiatric Center, Central Islip, New York 11722.

## Medication Certification Program

**Location:** Central Islip Psychiatric Center, Central Islip, NY.

**Length:** 37½ hours (1 week).

**Dates:** November 1978—Present.

**Objective:** To provide paraprofessionals with the basic knowledge and skills necessary to administer oral, rectal, vaginal, sublingual, and topical medications safely.

**Instruction:** Competency-based instruction in legal issues, administration and recording of medications, common side effects, common drug interactions, apothecary and metric systems of measurement, abbreviations, medical terminology, and use of standard reference books.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Nursing Sciences (11/80).

# CENTRAL LABOR REHABILITATION COUNCIL OF NEW YORK, INC.

The Central Labor Rehabilitation Council of New York, which is part of the New York City Central Labor Council, AFL/CIO, is sponsored by the vast majority of local unions in New York City. It serves that metropolitan area and provides professional, vocational, social, and other counseling, without fees, for workers, members of their families, and members of the community.

Within the Council, the Community Services Committee is responsible for implementing training programs for local union officers, including business representatives and shop stewards, and for rank and file workers. The training programs help participants learn more about the Council and the social service agencies in the community, and provide them with counseling skills to assist workers in dealing with job-related and personal problems.

Source of official student records: Office of the Director, Community Services Committee, New York City Central Labor Council, AFL/CIO, 386 Park Avenue South, New York, New York 10016.

## Basic Union Peer Counseling

**Location:** 386 Park Avenue South, New York, NY.

**Length:** 45 hours (15 weeks).

**Dates:** January 1980—Present.

**Objective:** To introduce participants to basic concepts in the helping process; to inform participants of relevant community resources.

**Instruction:** Theory of social welfare; formal system of welfare in the community; physical and mental health problems and programs; youth and family problems; alcohol and drug abuse in the workplace; safety and workmen's compensation; programs for the aged; consumerism; role of the peer counselor; techniques of counseling; communication skills. Six hours are devoted to a supervised practicum in which participants explore and develop their roles as union peer counselors. Field trips are a required part of the course.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1½ semester hours in Counseling (11/80).

## Course for Union Officers in Occupational Substance Abuse

**Location:** 386 Park Avenue South, New York, NY.

**Length:** 36 hours (9 weeks).

**Dates:** September 1979—Present.

**Objective:** To provide union officials with knowledge about drug and alcohol abuse in order to help them deal with substance abuse matters in labor negotiations.

**Instruction:** An overview of alcohol and drug abuse; human services and the labor market; legal aspects and contract provisions for the employed substance abuser; grievance and arbitration procedures. Students will be required to participate in role playing arbitration hearings developed from cases relevant to their work setting.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Labor Management Relations or Social Science (7/79).

## Introduction to Substance Abuse Counseling in the Workplace

**Location:** 386 Park Avenue South, New York, NY.

**Length:** 45 hours (10 weeks).

**Dates:** May 1979—Present.

**Objective:** To provide advanced level information on union peer counseling and to teach some basic techniques for substance abuse referral and counseling.

**Instruction:** Identifying the substance abuser; techniques for substance abuse referral and counseling; legal and financial problems; public and private resources available to the substance abuser; conflict resolution in labor-management relations. Throughout the course, the student is required to participate in a supervised practicum in which he explores and develops his role as a union peer counselor in the workplace.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Social Science (7/79).

## 1. Labor's Role in Employee Alcoholism Programs
## 2. Union Drug Counselor Training Program

**Location:** 386 Park Avenue South, New York, NY.

**Length:** 1. 16 hours (7 weeks).
2. 14 hours (6 weeks).

**Dates:** June 1976—Present.

**Objective:** To provide the participant with basic knowledge about drug and alcohol abuse needed to serve as a lay counselor in a work situation.

**Instruction: Course 1:** Study of alcoholism; its physiological effects; the impact of alcoholism on the family; on-the-job problems related to alcoholism;

the union's role in employee alcoholism programs; referral techniques; the study of existing labor-management alcoholism programs. **Course 2:** Pharmacology of drugs; the drug abuser and causes of drug abuse; selected treatment modalities; history of drug use and rehabilitation in the United States; labor arbitration of drug-related cases; selected referral units. Field trips are a required part of both courses.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Social Science (6/76). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Occupational Safety and Health

**Location:** 386 Park Avenue South, New York, NY.

**Length:** 45 hours (12 weeks).

**Dates:** January 1980—Present.

**Objective:** To introduce participants to a wide range of issues in the field of occupational safety and health.

**Instruction:** History and development of the concept of occupational safety and health; causes of job accidents; types of industrial injuries and illnesses; Federal protective legislation; New York State plan for occupational safety and health and the workmen's compensation program; legal aspects; safety committees in the workplace; communication about safety; implementation of health and safety programs by local unions. Field trips are a required part of the course.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1½ semester hours in Labor Management or Occupational Safety and Health (11/80).

## Problem Youth: An Interpretive and Services Approach

**Location:** 386 Park Avenue South, New York, NY.

**Length:** 45 hours (7 weeks); additional year-long practicum.

**Dates:** June 1978—Present.

**Objective:** To provide participants with knowledge of the etiology of delinquency, the nature and behavior of delinquent youth, and the range of community and criminal justice responses available to them.

**Instruction:** The young adult offender—socioeconomic, environmental, and psychological characteristics; an overview of the criminal justice system; probation as disposition and treatment; needs assessment of the young adult—social, family, recreational, educational, and work; counseling techniques. Field trips are a required part of the course. Following completion of the course, students are required to participate in a year-long supervised practicum in which they work with a delinquent youth.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Social Science (7/79).

## Survey of Substance Abuse Programs in the Workplace

**Location:** 386 Park Avenue South, New York, NY.

**Length:** 45 hours (6 weeks).

**Dates:** September 1979—Present.

**Objective:** To provide participants with basic knowledge about drug and alcohol abuse programs in the work setting.

**Instruction:** Study of alcoholism; its physiological effects; the impact of alcoholism on the family; on-the-job problems related to alcoholism; the union's role in employee alcoholism programs; referral techniques; the study of existing labor-management alcoholism programs. Pharmacology of drugs; the drug abuser and causes of drug abuse; selected treatment modalities; history of drug use and rehabilitation in the United States; labor arbitration of drug-related cases; selected referral units. Field trips are a required part of the course.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Labor Management or Social Science (7/79).

## Union Drug Counselor Training Program

Refer to Labor's Role in Employee Alcoholism Programs.

# CHARLES S. WILSON MEMORIAL HOSPITAL

The Charles S. Wilson Memorial Hospital is a private, nonprofit teaching hospital with 576 beds, including a 100-bed, long-term facility. The hospital, located in Johnson City, New York, is a major affiliate with Upstate Medical Center in Syracuse, New York, and the primary clincial facility for the State University of New York's Binghamton Clinical Campus. To support its medical and educational programs, Wilson has a medical library and a learning resource center with access to more than 600,000 references through an on-line computer retrieval service with the National Library of Medicine. The hospital has a trauma center, an intensive and cardiac care unit, a regional neonatal intensive care unit, and a pulmonary intensive care unit. Wilson also offers a dialysis unit, a gastrointestinal laboratory, a physical medicine and rehabilitation unit, and complete radiologic services including a CT scanner, ultrasound, and nuclear medicine sections. The hospital has complete outpatient programs in nearly all specialties and subspecialties, and family health centers based in Johnson City and other communities.

## SCHOOL FOR RESPIRATORY THERAPY TECHNICIANS

The school was established in 1973 and is licensed by the New York State Education Department. It is accredited by the A.M.A. Council on Allied Health Education through the Joint Review Committee on Respiratory Therapy Education. The school offers a minimum 1,500-clock-hour-based program consisting of two, ten-week didactic sections followed by a 880-hour clinical rotation including the following areas: general respiratory care, intensive care, clinical medicine, pulmonary laboratory, pulmonary physical therapy, neonatal intensive care, heart laboratory, and anesthesia/surgery. Graduates of the school are eligible to take examinations offered by the National Board for Respiratory Therapy to become certified respiratory therapy technicians.

Source of official student records: Program Director, School for Respiratory Therapy Technicians, Charles S. Wilson Memorial Hospital, 33-57 Harrison Street, Johnson City, New York 13790.

### Airways Management (RT104)

Refer to Cardiopulmonary Physiology and Respiratory Techniques.

### Basic Sciences (RT102)

**Location:** Charles S. Wilson Memorial Hospital, Johnson City, NY.

**Length:** 60 hours (10 weeks).

**Dates:** December 1973—Present.

**Objective:** To provide students with an introduction to the physical principles upon which respiratory therapy is based.

**Instruction:** Basic mathematics and chemistry; mobility of gases; air pressure; humidity; gas laws; surface tension; diffusion; laminar flow; velocity; solutions; selective permeability; tonicity; oxygen and carbon dioxide transport; oxy-hemoglobin dissociation curve; acid-base physiology. Laboratory experience is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in General Science (10/80).

### Cardiopulmonary Anatomy and Physiology (RT103)

Refer to Cardiopulmonary Physiology and Human Biological Science.

### Cardiopulmonary Physiology

### 1. *Airways Management (RT104)

### 2. **Cardiopulmonary Anatomy and Physiology (RT103)

**Location:** Charles S. Wilson Memorial Hospital, Johnson City, NY.

**Length:** 1. 20 hours (10 weeks).
2. 60 hours (10 weeks).

**Dates:** December 1973—Present.

**Objective:** To provide students with more advanced knowledge of the structure and function of the cardiovascular and pulmonary systems.

**Instruction: Course 1:** Structure and function of the

---

*This course is listed twice. A portion of the material contained in the course is relevant to the Cardiopulmonary Physiology sequence of courses. The other portion is relevant to the Respiratory Techniques sequence of courses. Although the statement of "Instruction" is repeated in its entirety under each sequence, it should *not* be viewed as duplicate content when credit is being awarded.

**This course is listed twice. A portion of the material contained in the course is relevant to the Cardiopulmonary Physiology sequence of courses. The other portion is relevant to the Human Biological Science sequence of courses. Although the statement of "Instruction" is repeated in its entirety under each sequence, it should *not* be viewed as duplicate content when credit is being awarded.

lung; defense mechanisms; obtaining and maintaining a patent airway; suctioning; tracheal intubation. **Course 2:** Structure and function of the circulatory and respiratory systems. Laboratory experience is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Cardiopulmonary Physiology (10/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Cardiopulmonary Resuscitation (RT106)

Refer to Respiratory Techniques.

## Clinical Medicine (RT111)

**Location:** Charles S. Wilson Memorial Hospital, Johnson City, NY.

**Length:** 60 hours (10 weeks).

**Dates:** May 1974—Present.

**Objective:** To provide students with a basic knowledge of diseases, with major emphasis on pulmonary diseases.

**Instruction:** The study of specific disease entities with emphasis on pulmonary disease. Includes symptomology, etiology, epidemiology, pathology, prognosis, and treatment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Respiratory Therapy (10/80).

## Clinical Rotation (RT121-128)

**Location:** Charles S. Wilson Memorial Hospital, Johnson City, NY.

**Length:** 880 hours (22 weeks).

**Dates:** May 1974—Present.

**Objective:** To provide students with supervised clinical training in respiratory care.

**Instruction:** Students rotate through various clinical areas including respiratory therapy, intensive care, neonatal intensive care, pulmonary function laboratory, pulmonary physical therapy, operating room, and ECG. Students spend time with pulmonary physicians reviewing X-rays and specialized procedures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 13 semester hours in Respiratory Therapy (10/80). NOTE: This course is equivalent to the requirement for certificate or freshman (AAS degree) level clinical experience.

## Gas, Humidity, and Aerosol Therapy (RT109)

Refer to Respiratory Techniques.

## Human Anatomy and Physiology (RT101)

Refer to Human Biological Science.

## Human Biological Science

### 1. **Cardiopulmonary Anatomy and Physiology (RT103)

### 2. Human Anatomy and Physiology (RT101)

**Location:** Charles S. Wilson Memorial Hospital, Johnson City, NY.

**Length:** 1. 60 hours (10 weeks).
2. 60 hours (10 weeks).

**Dates:** December 1973—Present.

**Objective:** To provide students with an introductory knowledge of the structures and functions of the human body; to provide students with an appropriate background for further study of cardiopulmonary physiology.

**Instruction: Course 1:** Structure and function of the circulatory and respiratory systems. Laboratory experience is *not* included. **Course 2:** Structure and function of the human body, including the cellular aspect. Basic overview of the integumentary, musculoskeletal, endocrine, digestive, excretory, nervous, and reproductive systems. Laboratory experience is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Human Biological Sciences (10/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Microbiology (RT105) (Microbiology for Respiratory Therapy Technicians)

**Location:** Charles S. Wilson Memorial Hospital, Johnson City, NY.

**Length:** 30 hours (10 weeks).

**Dates:** December 1973—Present.

**Objective:** To provide students with an understanding of the basic principles of microbiology and sterilization techniques as appropriate to respiratory therapy technicians.

**Instruction:** Naming and classifying microorganisms; bacterial anatomy and physiology; asepsis; etiology of infection; types of infection; pathogenesis; immunity; cleaning and sterilization. Laboratory experience is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Respiratory Therapy (10/80).

---

**This course is listed twice. A portion of the material contained in the course is relevant to the Cardiopulmonary Physiology sequence of courses. The other portion is relevant to the Human Biological Science sequence of courses. Although the statement of "Instruction" is repeated in its entirety under each sequence, it should *not* be viewed as duplicate content when credit is being awarded.

### Patient Care (RT112)

Refer to Respiratory Techniques.

### Pharmacology (RT107)

Refer to Respiratory Techniques.

### Prolonged Mechanical Ventilation (RT108)

Refer to Respiratory Techniques.

### Pulmonary Physical Therapy (RT110)

Refer to Respiratory Techniques.

### Respiratory Techniques

1. *Airways Management (RT104)
2. Cardiopulmonary Resuscitation (RT106)
3. Gas, Humidity, and Aerosol Therapy (RT109)
4. Patient Care (RT112)
5. Pharmacology (RT107)
6. Prolonged Mechanical Ventilation (RT108)
7. Pulmonary Physical Therapy (RT110)

**Location:** Charles S. Wilson Memorial Hospital, Johnson City, NY.

**Length:** 1. 20 hours (10 weeks).
2. 15 hours (10 weeks).
3. 80 hours (10 weeks).
4. 20 hours (10 weeks).
5. 20 hours (10 weeks).
6. 75 hours (10 weeks).
7. 30 hours (10 weeks).

**Dates:** 1. December 1973—Present.
2. December 1973—Present.
3. May 1974—Present.
4. December 1973—Present.
5. December 1973—Present.
6. May 1974—Present.
7. May 1974—Present.

**Objective:** To provide students with knowledge of respiratory therapy procedures and techniques to prepare them for clinical practice.

**Instruction: Course 1:** Structure and function of the lung; defense mechanisms; obtaining and maintaining a patent airway; suctioning; tracheal intubation. **Course 2:** Instruction and certification in cardiopulmonary resuscitation. **Course 3:** Medical gas delivery systems; oxygen therapy (indications, contraindications, and possible hazards); carboxygen and heliox therapy; aerosal and humidity therapy; oxygen measuring devices. **Course 4:** Professional, ethical, and medicolegal aspects of respiratory therapy; chest tubes; incentive spirometry; roentgenographic patterns in pulmonary disease. **Course 5:** Introduction to respiratory pharmacology including drug actions, indications, contraindications, side effects, and routes of delivery. **Course 6:** For adult, pediatric,and neonatal patients: general classification of ventilators; IPPB; indications for ventilator commitment; management of the patient ventilation system; weaning the patient from the ventilator; detailed description of specific ventilators. **Course 7:** Introduction to, and application of, pulmonary physical therapy techniques; arterial blood gas sampling; hospital isolation techniques.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Respiratory Therapy Techniques (10/80). NOTE: Courses 1, 2, 3, 4, 5, 6, and 7 must all be completed to receive credit.

---

*This course is listed twice. A portion of the material contained in the course is relevant to the Cardiopulmonary Physiology sequence of courses. The other portion is relevant to the Respiratory Techniques sequence of courses. Although the statement of "Instruction" is repeated in its entirety under each sequence, it should *not* be viewed as duplicate content when credit is being awarded.

# CHAUTAUQUA INSTITUTION

Chautauqua Institution, founded in 1874, is located on 700 acres near the head of Chautauqua Lake in southwestern New York State. It is a residential community, a summer resort colony, and an educational institution.

The Chautauqua Summer School was established soon after the founding and is believed to be the oldest summer school in the United States. Chautauqua's educational aim is to provide creative opportunities for people of all ages with varying interests. Full dance and theatre programs are held, in addition to arts and crafts courses and special-interest topics. Advanced music training and professional studies for teachers complete the offerings.

Course offerings of the Summer School are augmented by many artistic, intellectual and religious discussions and programs. These are easily accessible to all and occur daily throughout the nine-week season. Included are frequent resident symphony orchestra concerts and concerts by renowned international artists, a recital series, an art gallery and annual art festival, opera company and repertory theatre productions, a film theatre, and daily lectures, discussions, and sermons on a wide variety of topics.

Source of official student records: Registrar, Summer School Office, Box 28, Chautauqua Institution, Chautauqua, New York 14722.

## ART CENTER

The Art Center serves students of all ages who are interested in exploring various art forms. Both advanced artists and novices are individually supervised by experienced artist/teachers. Instruction is offered in painting and drawing, pottery, ceramics, jewelry making, sculpture, weaving, art criticism, and art appreciation. Throughout the season, the students and faculty participate in various art exhibitions.

### Ceramic Sculpture (A781)

**(Formerly Ceramic Sculpture [A103, A106])**

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 120 hours (7 weeks).

**Dates:** June 1974—Present.

**Objective:** To provide the student with knowledge of, and basic techniques in, working with the human figure employing ceramic materials and processes.

**Instruction:** Combination of the techniques of modeling the human figure with those of ceramics. Compositions are executed by various means in clay, fired in the kiln, and sometimes glazed. Instruction includes the making of piece-molds, pouring, and pressing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Ceramic Sculpture (8/75). NOTE: Credit should be awarded before the end of the second year following completion of a course. Credit may be awarded twice to students who complete the course more than one time.

### Ceramics and Jewelry/Metals

**Part 1: Ceramics (A710, A711, A783)**
**(Formerly Ceramics [A104C, A107, A108])**
**Part 2: Jewelry/Metals (A730-A741)**
**(Formerly Metal Shop [A104M, A109, A110])**

**Location:** Chautauqua Institution, Chautauqua , NY.

**Length:** 120 hours (4-8 weeks).

**Dates:** June 1974—Present.

**Objective: Part 1:** To familiarize the student with the possibilities in working with clay. **Part 2:** To familiarize the student with the possibilities in working with silver, copper, and brass.

**Instruction: Part 1:** Throwing on the Potter's Wheel; hand-building (coil, slab, press-mold); decorating with slip and/or underglaze colors; stains and oxides; glaze technology and application. **Part 2:** Techniques of working with silver and other metals; sawing plate; working with wire; soldering setting of stones (bezel and prong); modeling in wax preparatory to centrifugal casting; other methods of casting; finishing a piece of jewelry. Enamel techniques on copper and fine silver; dusting; wet layering; cloisonné; basse taille; plique a jour, etc.

**Credit recommendation: Part 1:** In the lower division baccalaureate/associate degree category, 3 semester hours in Ceramics (8/75). **Part 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Metal and Jewelry (8/75). NOTE: Credit should be awarded before the end of the second year following completion of a course.

## Painting and Drawing

**Part 1: Painting (A750, A757, A760)**
**(Formerly Painting [A101P, A118, A119])**
**Part 2: Drawing (A761, A750, A757)**
**(Formerly Drawing [A101D, A120, A121])**

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 120 hours (4-8 weeks).

**Dates:** June 1974—Present.

**Objective: Part 1:** To enable the student to express his/her ideas on canvas by means of various painting media. **Part 2:** To enable the student to express his/her ideas through the medium of drawing.

**Instruction:** Students concentrate on either drawing or painting for the course. **Part 1:** Student-selected focus in portraiture, figure, landscape, still life, or abstract areas utilizing acrylics, oils, and watercolor. **Part 2:** Student-selected focus in portraiture, figure drawing, landscape, still life, or non-objective utilizing drawing materials.

**Credit recommendation: Part 1:** In the lower division baccalaureate/associate degree category, 3 semester hours in Painting (8/75). **Part 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Drawing (8/75). NOTE: Credit should be awarded before the end of the second year following completion of a course. Credit may be awarded twice to students who complete the course more than one time.

## Sculpture (A780, A782)

**(Formerly Sculpture [A103, A131])**

**Location:** Chautauqua Institution, Chautauqua, NY

**Length:** 120 hours (7 weeks).

**Dates:** June 1974—Present.

**Objective:** To provide the student with experience in modeling the human form, both portraiture and full figure.

**Instruction:** Studio-oriented approach to the subject of sculpture and a strong foundation in the mechanics and techniques of making portrait-busts and figure pieces.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Sculpture (8/75). NOTE: Credit should be awarded before the end of the second year following completion of a course. Credit may be awarded twice to students who complete the course more than one time.

## Weaving (A720-A725)

**(Formerly Weaving [A140-A145])**

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 120 hours (8 weeks).

**Dates:** June 1974—Present.

**Objective:** To provide instruction in weaving at three levels.

**Instruction:** Students are classified as beginning, intermediate, or advanced depending on their experience, knowledge, and ability. **Beginning:** Warping, beaming and threading; design; use of colors; combinations of yarns; weaving equipment and techniques. Students weave on prepared looms. **Intermediate:** Using basic techniques and weaves, students work independently to design and create more detailed and difficult patterns. They also design and execute larger pieces and projects. (Prerequisite: one year of class or self-taught weaving.) **Advanced:** Individualized instruction at the advanced level involving the techniques of double weaves, multiple harness lace weaves, summer and winter, and crackle weaves. (Prerequisite: weaving experience, ability to dress the loom, understanding of drafts and techniques, tie-ups, some designing, and knowledge of yarns.)

**Credit recommendation: Beginning or Intermediate:** In the lower division baccalaureate/associate degree category, 3 semester hours in Weaving (8/75). **Advanced:** In the upper division baccalaureate category, 3 semester hours in Weaving (8/75). NOTE: Credit may be awarded to a student for all three levels of instruction. Credit should be awarded before the end of the second year following completion of a course.

## DANCE DEPARTMENT D300

The Chautauqua Dance Department offers an eight-week summer curriculum for beginning through advanced-professional level students. Students participate in graded courses which include classical ballet, modern dance, ethnic (character and Spanish) and jazz (contemporary theatre and television) and which are augmented by two-week workshops in dance-related subjects. Students are placed by audition in appropriate classes depending on ability, training, and strength. They may elect to substitute a major (one hour per day) for the workshops or may elect to take both the major and the workshops. Throughout the summer, students have the opportunity to observe and learn from professional guest dance artists and companies in rehearsal and performance.

### 1. Ballet IA (Elementary)
### 2. Ballet IB (Intermediate)
### 3. Ballet IIA (Intermediate-Advanced)
### 4. Ballet IIB (Advanced)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 1. **Version 1:** 40 hours (8 weeks).
**Version 2:** 60 hours (8 weeks).
2. 60 hours (8 weeks).
3. 60 hours (8 weeks).
4. 60 hours (8 weeks).

**Dates:** 1. **Version 1:** June 1974—August 1977.
**Version 2:** June 1978—Present.
2. June 1974—Present.
3. June 1974—Present.
4. June 1974—Present.

**Objective:** To instruct students in the technique and art of classical ballet at four levels.

**Instruction:** Classical ballet techniques. Barre; port de bras; pirouettes; allegro. Pointe work is offered to the professional-advanced and intermediate students when they have achieved technical readiness.

**Credit recommendation: Course 1, Version 1:** In the lower division baccalaureate/associate degree category, 1 semester hour in Ballet (8/75). **Course 1, Version 2:** In the lower division baccalaureate/associate degree category, 2 semester hours in Ballet (8/79). **Course 2:** In the lower division baccalaureate/associate degree category, 2 semester hours in Ballet (8/75). **Courses 3 and 4:** In the upper division baccalaureate category, 2 semester hours in Ballet (8/75). **All Courses:** An additional 1 semester hour at the same level is recommended for students completing a major in Ballet (8/75). NOTE: Credit should be awarded before the end of the second year following completion of a course.

### 1. Modern Dance IA (Elementary)
### 2. Modern Dance IB (Intermediate)
### 3. Modern Dance IIA (Intermediate-Advanced)
### 4. Modern Dance IIB (Advanced)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 1. **Version 1:** 40 hours (8 weeks).
**Version 2:** 60 hours (8 weeks).
2. **Version 1:** 40 hours (8 weeks).
**Version 2:** 60 hours (8 weeks).
3. **Version 1:** 40 hours (8 weeks).
**Version 2:** 60 hours (8 weeks).
4. 60 hours (8 weeks).

**Dates:** 1. **Version 1:** June 1974—August 1977.
**Version 2:** June 1978—Present.
2. **Version 1:** June 1974—August 1975.
**Version 2:** June 1976—Present.
3. **Version 1:** June 1974—August 1975.
**Version 2:** June 1976—Present.
4. June 1974—Present.

**Objective:** To instruct the student in the technique, improvisation, and composition of modern dance.

**Instruction:** Personalized communicative expression through modern dance movement, including identification of logical precepts for correct body education. Floor and standing exercises; across-the-floor combinations using four basic elements of dance (motion, shape, space, and time); development of physical and perceptual skills; movement composition.

**Credit recommendation: Course 1, Version 1;** and **Course 2, Version 1:** In the lower division baccalaureate/associate degree category, 1 semester hour in Modern Dance (8/75). **Course 1, Version 2;** and **Course 2, Version 2:** In the lower division baccalaureate/associate degree category, 2 semester hours in Modern Dance (8/76). **Course 3, Version 1:** In the upper division baccalaureate category, 1 semester hour in Modern Dance (8/75). **Course 3, Version 2:** In the upper division baccalaureate category, 2 semester hours in Modern Dance (8/76). **Course 4:** In the upper division baccalaureate category, 2 semester hours in Modern Dance (8/75). **All Courses:** An additional 1 semester hour at the same level is recomended for students completing a major in Modern Dance (8/75). NOTE: Credit should be awarded before the end of the second year following completion of a course.

## SCHOOL OF MUSIC

The Music School offers an intensive seven-week program of study, practice, and related musical activities. The School is divided into a Senior Division and a Preparatory Division; it also offers a number of short-term workshops with leading musicians. All courses listed below are offered in the Senior Division. In addition to formal instruction, the Senior Division offers students many opportunities for public performances in the Music School Festival Orchestra and in small group ensembles. The students also are able to attend concerts by a professional resident symphony orchestra, performances by a resident opera company, and concerts by internationally known guest artists.

### Chamber Music Group I (M201A, M202)

Refer to Music School Festival Orchestra (M201).

### Chamber Music Group II (M201B, M203)

Refer to Music School Festival Orchestra (M201).

### Chamber Music Workshop (M201C, M204)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 31½ hours (7 weeks).

**Dates:** June 1976—Present.

**Objective:** To instruct the student in the technique and art of chamber music performance.

**Instruction:** Music concept; technique as a chamber music performer; interpretation, repertoire. Experience in rehearsal techniques and participation in performances of standard chamber music repertoire.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Chamber Music (8/76). NOTE: Credit should be awarded before the end of the second year following completion of the course. This course is identical to Chamber Music Group II (M201B, M203).

### Diction for Singers
### 1. French (M234A, M221F)
### 2. German (M234B, M221G)
### 3. Italian (M234C, M221I)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 21 hours (7 weeks).

**Dates:** June 1976—Present.

**Objective:** To enable the student to read at sight in French, German, or Italian with a pronunciation that not only is accurate but also reflects a minimal foreign accent.

**Instruction:** Studies in pronunciation for singers, with special attention given to the song and operatic literature and to developing fluency in correct pronunciation in sight reading the language under study.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Diction for Singers or Voice (8/76). NOTE: Credit should be awarded before the end of the second year following completion of a course.

### Interpretation Classes (M213)

**(Formerly Interpretation Classes [M216, M214])**

Refer to Piano Literature.

### Master Classes (M214)

**(Formerly Master Classes [M217, M213])**

Refer to Piano Literature.

### 1. Music School Festival Orchestra (M201)
### 2. Chamber Music Group I (M201A, M202)
### 3. Chamber Music Group II (M201B, M203)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 1. 70 hours (7 weeks).
2. 14 hours (7 weeks).
3. 31½ hours (7 weeks).

**Dates:** June 1976—Present.

**Objective:** To instruct the student in the technique and art of orchestral and chamber music performance.

**Instruction:** Music concept; technique as an orchestra and chamber music performer; interpretation; repertoire. Standard and contemporary repertory, including large and small choral and orchestral works and concerto accompaniments. Experience in rehearsal techniques and participation in performances of the full orchestra and small group ensembles.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Orchestra (8/76). NOTE: Credit should be awarded before the end of the second year following completion of a course. Course 1 must be completed with either Course 2 or Course 3 to receive credit. Course 3 is identical to Chamber Music Workshop (M201C, M204).

### Opera-Musical Theatre Workshop (M222)

**(Formerly Opera Workshop [M232, M222])**

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 31½ hours (7 weeks).

**Dates:** June 1976—Present.

**Objective:** To provide students with an understanding of opera as a form of the dramatic arts.

**Instruction:** Study and memorization of opera roles; proper use of hands and bodies in expressing the meaning of words being sung; performance of operatic scenes to provide practical experience.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Opera Workshop (8/76). NOTE: Credit should be awarded before the end of the second year following completion of the course.

### Opera Workshop (M232, M222)

Refer to Opera-Musical Theatre Workshop (M222).

### Orchestral Instruments – Individual Instruction

1. Bass, String (M270, M240)
2. Bass Clarinet (M241)
3. Bassoon (M271, M242)
4. Cello (M272, M273, M243, M244)
5. Clarinet (M275, M246)
6. Flute (M276, M278, M247-M249)
7. Harp (M279, M280, M252)
8. Horn (M281, M253)
9. Oboe (M282, M255)
10. Percussion (M283, M256)
11. Saxophone (M284, M257)
12. Timpani (M289, M262)
13. Trombone (M285, M258, M259)
14. Trumpet (M287, M260)
15. Tuba/Bass Trombone (M288, M261)
16. Viola (M290-M293, M298, M263-M267)
17. Violin (M294-M297, M263-M271)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 7 hour-long private lessons and individual practice during 7-week program.

**Dates:** June 1976 – Present.

**Objective:** To teach the student the fundamentals of playing the particular instrument in chamber music, solo, and orchestral situations.

**Instruction:** Concentrated applied music study in the particular instrument at levels appropriate to the experience and capabilities of the student. Instructors typically are artist-teachers and members of the Chautauqua Symphony Orchestra.

**Credit recommendation: Each course:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in the particular instrument (8/76). NOTE: Credit should be awarded before the end of the second year following completion of a course.

### Organ – Individual Instruction (M254, M237)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 7 hour-long private lessons and individual practice during 7-week program.

**Dates:** June 1976 – Present.

**Objective:** To aid the student in attaining the technical facility and coordination needed for the execution of all the organ repertoire.

**Instruction:** Concentrated applied study in the organ at levels appropriate to the experience and capabilities of the student. Repertoire study ranging from pre-Bach German and French to 20th century German, French, and American. Discussion of form, style, performance practices at the time and how they might apply now.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Organ (8/76). NOTE: Credit should be awarded before the end of the second year following completion of the course.

### Piano – Individual Instruction (M221-M223, M207-M209)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 7 hour-long private lessons and individual practice during 7-week program.

**Dates:** June 1976 – Present.

**Objective:** To provide the student with individual instruction in piano.

**Instruction:** Concentrated applied music study in the piano at levels appropriate to the experience and capabilities of the student. Development of technical proficiency and solving of fundamental problems involved in playing the piano.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Piano (8/76). NOTE: Credit should be awarded before the end of the second year following completion of the course.

### Piano Literature

### 1. Interpretation Classes (M213)

**(Formerly Interpretation Classes [M216, M214])**

### 2. Master Classes (214)

**(Formerly Master Classes [M217, M213])**

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 1. 14 hours (7 weeks).
2. 21 hours (7 weeks).

**Dates:** June 1976 – Present.

**Objective:** To provide the student with a comprehensive survey of piano literature from the Baroque period through the Romantic and early contemporary periods.

**Instruction:** Live performances by concert performers and exceptional students of the major works of some 20 composers, accompanied by a discussion of their form and interpretation. The major works include those of Bach, Haydn, Mozart, Beethoven, Brahms, Schumann, Chopin, and Liszt.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Piano Literature (8/76). NOTE: Credit should be awarded before the end of the second year following completion of a course. Courses 1 and 2 must both be completed to receive credit.

## Survey of Vocal Literature (M233, M223)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 21 hours (7 weeks).

**Dates:** June 1976—Present.

**Objective:** To introduce the student to a wide range of vocal literature and to give some critique on style, diction, and interpretation.

**Instruction:** Representative literature of principal German, French, British, and American song composers of the 18th, 19th, and 20th centuries. Lecture and participation in performance.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Survey of Vocal Literature (8/76). NOTE: Credit should be awarded before the end of the second year following completion of the course.

## Voice—Individual Instruction (M237-M239, M217-M219)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 7 hour-long private lessons and individual practice during 7-week program.

**Dates:** June 1976—Present.

**Objective:** To instruct the student in the technique and art of using the voice.

**Instruction:** Private lessons in vocal development and concepts of tone, pitch accuracy, breathing, vocal exercises, musical style, and performance practices and interpretation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Voice (8/76). NOTE: Credit should be awarded before the end of the second year following completion of the course.

# SPECIAL INTEREST OFFERINGS

In addition to the art, dance, and theatre schools, a wide variety of special interest workshops and courses are conducted each year. The schedule of approximately 85 offerings is revised annually to meet the requests of prospective students and instructors.

## Writers' Workshop

**Part 1: Poetry Section (483P, S470)**
**Part 2: Fiction Section (483F, S468)**

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** **Part 1, Version 1:** 15 hours (3 weeks).
**Part 1, Version 2:** 15 hours (2 weeks).
**Part 2, Version 1:** 15 hours (3 weeks).
**Part 2, Version 2:** 15 hours (2 weeks).

**Dates:** **Version 1:** June 1975—February 1977.
**Version 2:** March 1977—Present.

**Objective: Part 1:** To increase the student's knowledge of poetry and ability to write it. **Part 2:** To increase the student's knowledge of fiction and ability to write it.

**Instruction: Part 1:** Study and practice of the basic tools of poetry. Emphasis is on the student's own poetry, either work in progress or newly created during the course. Students work on their poetry outside of class and receive written critiques from the instructor, comments from the class, and a minimum of one hour of conference time. **Part 2:** Classroom lectures concentrate on plot, character development, and forms of the short story. Emphasis is on the student's own writing, either work in progress or newly created during the course. Students work outside of class and receive written critiques from the instructor, comments from the class, and a minimum of one hour of manuscript conference time.

**Credit recommendation: Part 1:** In the lower division baccalaureate/associate degree category, 1 semester hour in Independent Study in Poetry (8/76). **Part 2:** In the lower division baccalaureate/associate degree category, 1 semester hour in Independent Study in Fiction (8/76). NOTE: Credit should be awarded before the end of the second year following completion of a course.

## THEATRE DEPARTMENT

The Cleveland Play House at Chautauqua provides a six-week summer theatre program, giving preprofessional training to young actors in a concentrated, practical course structure. Students study a diverse curriculum with emphasis in acting, but designed to incorporate other aspects of theatre as well. The faculty comprises actors and directors from the Play House company; students receive individual attention through tutorials and small classes. At the end of the term, students participate in a series of showcase productions, drawing together the various aspects of their training. Through the program, students become acquainted with some of the methods and techniques of the actor, improve the uses of their physical and vocal instruments, and receive an impression of life in the professional theatre.

### Theatre School (T500)

**Location:** Chautauqua Institution, Chautauqua, NY.

**Length:** 150 hours (6 weeks).

**Dates:** June 1975—January 1981.

**Objective:** To introduce the potential acting student to a system of training and discipline that he/she will encounter in continuing study toward work in the theatre.

**Instruction:** Movement: relaxation exercises, corrective movement, preparation of the body as a flexible and expressive instrument (includes dance and mime work). Voice: breathing, resonators, vowels, consonants, efficient production of sound, phrasing, interpretation, rhythm, articulation, and verse. Improvisation: theatre games, orientation exercises, stimulation of the imagination through sensitivity and awareness, Spolin techniques. Stage fencing: techniques for creating effective stage sword fights. Scene work: the study, preparation, and performance of a variety of scenes with close guidance from faculty. Stagecraft is not included. The course also includes brief lectures on the actor's relationship to other theatre arts.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Acting (8/76). NOTE: Credit should be awarded before the end of the second year following completion of the course.

# CITY OF YONKERS POLICE DEPARTMENT

The City of Yonkers Police Department serves the approximately 250,000 citizens of the fourth largest municipality in the State of New York. Over 550 persons are employed by the department.

## INCENTIVE TRAINING PROGRAM

The course listed below is part of an incentive training program designed to encourage participation in a college program by members of all ranks of the Yonkers Police Department. It is conducted under the supervision of the Training Division. The goal is to make officers aware of the current changes in the field of law enforcement.

Source of official student records: Director of Training, Special Operations Command, 730 Grassy Sprain Road East, Yonkers, New York 10710.

### Criminal Investigation

**Location:** Special Operations Division Building, Yonkers, NY.

**Length:** 45 hours (15 weeks).

**Dates:** September 1976—March 1978.

**Objective:** To provide the student with an understanding of the theory and practice of criminal investigation.

**Instruction:** General investigative procedures; types, importance, and protection of physical evidence; interviews, interrogations, and confessions; surveillance techniques; history and classification of fingerprints; the penal law relating to criminal investigations; investigation of specialized crimes, including arson and homicide. Particular emphasis is placed on the United States Constitutional limitations in the areas of search and seizure, probable cause to arrest, line-ups, and right to counsel. Use of lecture, discussion, and practical exercises.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Criminal Justice or Criminal Science (10/76).

# CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

Consolidated Edison is an investor-owned public utility with headquarters in New York City. The company supplies electricity and gas to customers in New York City and Westchester County, and also supplies steam to heat and air condition major buildings in lower and midtown Manhattan. Consolidated Edison has 25,000 employees.

The company offers a variety of educational activities to its employees, covering such areas as customer service, gas operations, administrative skills, welding, and electrical construction. The Management and Professional Development staff develops management programs and courses designed to meet specific company needs by improving employees' overall managerial effectiveness. The staff of the Technical Training Center develops programs and courses designed to meet specific company needs in technical areas. The Training Resources staff provides in-house consulting services in support of departments and corporate requirements.

## INDIAN POINT STATION–SIMULATOR/ENERGY EDUCATION CENTER

The Nuclear Training Center at Indian Point Station provides education and training programs for nuclear facilities personnel. These programs are designed to impart the academic skills required for work at a nuclear facility, along with practical techniques and application methods.

Source of official student records: Nuclear Training Director, Indian Point Station, Consolidated Edison, Inc., Broadway and Bleakley Avenues, Buchanan, New York 10511.

### Atomic-Nuclear Physics (02) (Basic Nuclear Physics of Nuclear Technology)

**Location:** Indian Point Nuclear Power Generating Station, Buchanan, NY.

**Length:** 104 hours (6 weeks).

**Dates:** January 1980–Present.

**Objective:** To provide participants with the fundamental knowledge of nuclear physics required for the study of nuclear reactor technology.

**Instruction:** Structure of the atom; equivalence of mass and energy; energy production in the fission and fusion process; types of radiation and interactions of radiation with matter; nuclear reactions; nuclear fission; cross sections; neutron moderation; neutron flux and reactor power level.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Engineering Technology (12/80).

### Fluid Mechanics (06)

Refer to Survey of Nuclear Engineering and Thermal-Hydraulics of Nuclear Power Plants.

### Heat Transfer (07)

Refer to Survey of Nuclear Engineering and Thermal-Hydraulics of Nuclear Power Plants.

### Nuclear Power Plants I: Primary and Secondary Systems

**Location:** Indian Point Nuclear Power Generating Station, Buchanan, NY.

**Length:** 160 hours (4 weeks).

**Dates:** January 1980–Present.

**Objective:** To provide participants with a detailed understanding of primary and secondary nuclear power plant systems.

**Instruction:** Primary and secondary systems: reactor coolant systems; chemical volume and control systems; component cooling water systems; residual heat removal systems; emergency core cooling systems; vapor containment systems and containment isolation; waste disposal systems; ventilation systems; main steam supply systems; feedwater systems; condensate systems; service water systems; sampling systems; circulating water systems.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Engineering (12/80).

### Nuclear Power Plants II: Control Systems

**Location:** Indian Point Nuclear Power Generating Station, Buchanan, NY.

**Length:** 96 hours (3 weeks).

**Dates:** January 1980–Present.

**Objective:** To provide participants with a detailed understanding of nuclear power plant control systems.

**Instruction:** Control systems including those for electrical distribution, turbine generators, diesel generators, control rods, and coolant temperature; nuclear instrumentation; reactor protection system; core design and transient analysis.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Engineering (12/80).

### Radiation Protection (03)
### (Nuclear Radiation Protection)

**Location:** Indian Point Nuclear Power Generating Station, Buchanan, NY.

**Length:** 72 hours (4 weeks).

**Dates:** January 1980—Present.

**Objective:** To provide participants with a fundamental background in the principles and practices of nuclear radiation protection.

**Instruction:** Biological effects of radiation; radiation units; dose limits; personnel monitoring; practical limits and controls; dose calculations; instruments for radiation detection and measurement.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Engineering Technology (12/80).

### Reactor Theory (04)
### (Nuclear Reactor Theory)

**Location:** Indian Point Nuclear Power Generating Station, Buchanan, NY.

**Length:** 180 hours (9 weeks).

**Dates:** January 1980—Present.

**Objective:** To provide participants with a basic understanding of the principles of neutron chain-reacting systems.

**Instruction:** Review of nuclear properties and reaction rates; neutron multiplication and multiplication factors in infinite and finite systems; reactivity feedback mechanisms; control methods; reactor kinetics, subcritical multiplication, and criticality.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Engineering Technology (12/80).

### Simulator Training (31)
### (Nuclear Plant Operations Laboratory)

**Location:** Indian Point Nuclear Power Generating Station, Buchanan, NY.

**Length:** 240 hours (6 weeks).

**Dates:** January 1980—Present.

**Objective:** To provide participants with hands-on experience in operating a nuclear power plant simulator.

**Instruction:** Practical simulator exercises in startup, routine operation, power level changes, and shutdown; response to anticipated abnormal conditions and postulated accidents; radiation hazards and emergency plans.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Engineering (12/80).

### Survey of Nuclear Engineering
### 1. Atomic-Nuclear Physics (02) (Basic Nuclear Physics of Nuclear Technology)
### 2. Radiation Protection (03) (Nuclear Radiation Protection)
### 3. Reactor Theory (04) (Nuclear Reactor Theory)
### 4. Thermodynamics (05)
### 5. Fluid Mechanics (06)
### 6. Heat Transfer (07)

**Location:** Indian Point Nuclear Power Generating Station, Buchanan, NY.

**Length:** 1. 104 hours (6 weeks).
2. 72 hours (4 weeks).
3. 180 hours (9 weeks).
4. 60 hours (3 weeks).
5. 52 hours (3 weeks).
6. 68 hours (4 weeks).

**Dates:** January 1980—Present.

**Objective: Course 1:** To provide participants with the fundamental knowledge of nuclear physics required for the study of nuclear reactor technology. **Course 2:** To provide participants with a fundamental background in the principles and practices of nuclear radiation protection. **Course 3:** To provide participants with a basic understanding of the principles of neutron chain-reacting systems. **Courses 4, 5, and 6:** To provide participants with a basic understanding of thermodynamics, fluid mechanics, and heat transfer for nuclear reactor systems.

**Instruction: Course 1:** Structure of the atom; equivalence of mass and energy; energy production in the fission and fusion process; types of radiation and interactions of radiation with matter; nuclear reactions; nuclear fission; cross sections; neutron moderation; neutron flux and reactor power level. **Course 2:** Biological effects of radiation; radiation units; dose limits; personnel monitoring; practical limits and controls; dose calculations; instruments for radiation detection and measurement. **Course 3:** Review of nuclear properties and reaction rates; neutron multiplication and multiplication factors in infinite and finite systems; reactivity feedback mechanisms; control methods; reactor kinetics, subcritical multiplication, and criticality. **Course 4:** Thermodynamic properties and laws; ideal gas laws; steam tables and Mollier diagrams; steam-turbine cycle applications.

**Course 5:** Fluid properties; flow measuring devices; fluid statics; continuity and energy equations; Reynolds number. **Course 6:** Introduction to conduction, convection, and radiation; heat exchangers; boiling heat transfer, departure from nucleate boiling, and hot channel factors; two-phase flow; power distribution and peaking factors.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering (12/80). NOTE: Courses 1, 2, 3, 4, 5, and 6 must all be completed to receive credit.

### Thermal-Hydraulics of Nuclear Power Plants

### 1. Thermodynamics (05)

### 2. Fluid Mechanics (06)

### 3. Heat Transfer (07)

**Location:** Indian Point Nuclear Power Generating Station, Buchanan, NY.

**Length:** 1. 60 hours (3 weeks).
2. 52 hours (3 weeks).
3. 68 hours (4 weeks).

**Dates:** January 1980—Present.

**Objective:** To provide participants with a basic understanding of thermodynamics, fluid mechanics, and heat transfer for nuclear reactor systems.

**Instruction: Course 1:** Thermodynamic properties and laws; ideal gas laws; steam tables and Mollier diagrams; steam-turbine cycle applications. **Course 2:** Fluid properties; flow measuring devices; fluid statics; continuity and energy equations; Reynolds number. **Course 3:** Introduction to conduction, convection, and radiation; heat exchangers; boiling heat transfer, departure from nucleate boiling, and hot channel factors; two-phase flow; power distributions and peaking factors.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Engineering Technology (12/80). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Thermodynamics (05)

Refer to Survey of Nuclear Engineering and Thermal-Hydraulics of Nuclear Power Plants.

## MANAGEMENT AND PROFESSIONAL DEVELOPMENT GROUP

Source of official student records: Subsection Manager of Management Development, Consolidated Edison, Inc., Room 324, 4 Irving Place, New York, New York 10003.

### Assessor Training Workshop (MD-13, HRIS-8502)

**Location:** Company headquarters, 4 Irving Place, New York, NY; company-arranged facilities.

**Length: Part 1:** 40 hours (1 week).
**Part 2:** 40 hours (1 week).

**Dates: Version 1:** March 1974—October 1979.
**Version 2:** November 1979—Present.

**Objective:** To train management personnel to observe, record, and evaluate behavior objectively in order to assess the interpersonal and administrative abilities of employees.

**Instruction: Version 1, Part 1:** Origins, history, and application of assessment techniques; principles, elements, and pitfalls of the perceptual process; definition and determination of abilities to be evaluated; function of the assessment center and its relation to the supervisory job; in-basket exercises and interviews; the background interview; report writing. Workshop format includes role playing, presentations, group discussion, critique, and audiovisual aids. **Version 1, Part 2:** Observation of individuals in group discussion; preparing for and conducting background interviews; analysis of in-baskets with subsequent interviews; observation of simulated interviews; report writing; participation in a final evaluation discussion. Students work in individual consultation with the administrator/instructor. **Version 2, Part 1:** Origins and history of assessment techniques, and their use at Con Edison; purpose, function, and benefits of the assessment center; definition and determination of abilities to be evaluated; roles of assessment center participants; scheduling exercise and interview; employee discussion, work supervision, and written exercises; recording, reporting, and interpreting behavior. Workshop format includes lectures, video presentations, role playing, group discussion, and critiques. **Version 2, Part 2:** Preparing for and conducting scheduling exercise and interviews; recording and reporting candidates' performance in scheduling exercise; observing, recording, and interpreting candidates' performance in other exercises; role playing; participation in final evaluation discussions. Students work in individual consultation with the administrator/instructor.

**Credit recommendation: Part 1:** In the lower division baccalaureate/ associate degree category or in the upper division baccalaureate category, 3 semester hours in Personnel Administration (4/75). **Part 2:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Personnel Administration (4/75).

### Clear Concise Business Writing (HRIS-8819)

**(Formerly Effective Writing Workshop [STC 11,8100])**

**Location:** Training facilities throughout the company.

**Length:** 32 hours (4 weeks); additional 28 hours of independent study and programmed instruction.

**Dates:** July 1973—Present.

**Objective:** To enable the student to achieve organization, clarity and conciseness in business correspondence and report writing, including technical reports, through the application of specific techniques and editing skills.

**Instruction:** An intensive course in editing designed to save and strengthen use of words and to make business writing clearer and more concise. Besides editing techniques, eight English points are reviewed, after which the students complete a "language check-up." Self-study English lessons are recommended when needed. The course includes daily written exercises (report excerpts) to teach individual editing techniques, a summary report (rewritten with students working in teams), and a 250-300 word report which is submitted near the end of the course for team editing and final approval.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business, Business Education, or Engineering (9/75).

### Communications Workshop (HRIS-8506)

**(Formerly Communication [MD 10-1])**

Refer to Management of Managers.

### Conflict Management Workshop—Phase I (HRIS-8508)

**(Formerly Conflict Management [MD-3])**

Refer to Management of Managers.

### Effective Writing Workshop (STC 11,8100)

Refer to Clear Concise Business Writing (HRIS-8819).

### 1. Interviewing Skills Workshop
### 2. Leadership Training
### 3. Managing Your Time
### 4. Presentation Skills

**Location:** Company headquarters, 4 Irving Place, New York, NY.

**Length:** 1. 24 hours (3 days).
2. 24 hours (3 days).
3. 8 hours (1 day).
4. 32 hours (4 days).

**Dates:** 1. July 1979—Present.
2. October 1981—Present.
3. September 1979—Present.
4. April 1979—Present.

**Objective: Course 1:** To provide participants with an introduction to, and review of, the concepts and methods that produce effective interviews. **Course 2:** To help participants assess their own leadership styles and understand the application of leadership techniques in work situations. **Course 3:** To introduce participants to concepts and methods of time management. **Course 4:** To improve participants' skills in making presentations to groups of any size.

**Instruction: Course 1:** Types of interviews; interviewing skills; EEC, affirmative action, and handicapped requirements; the interview process. Videotapes are used. **Course 2:** Interpersonal dynamics and communication; group decision making, group development; conflict management; counseling; leadership styles. **Course 3:** Principles of time management; time wasters; delegation; handling interruptions; establishing priorities; action planning. **Course 4:** Communication process; elements of oral communication; elements of projection; organizing a presentation; handling audience situations. Videotapes are used.

**Credit recommendation: Course 2 alone:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Management (8/81). **Course 4 alone:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Communication or Management (8/81). **Courses 1, 2, 3, and 4 together:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Management (8/81). NOTE: Credit is *not* recommended for Courses 1 and 3 alone.

### Leadership Training

Refer to Interviewing Skills Workshop.

### Management of Managers
### 1. Communications Workshop (MD 10-1, HRIS-8506)
### 2. Conflict Management Workshop—Phase I (MD-3, HRIS-8508)
### 3. Motivation Workshop (MD-6, HRIS-8558)
### 4. Problem Solving Workshop (MD-18, HRIS-8566)

**Location:** Training facilties throughout the company.

**Length:** 1. 16 hours (2 days).
2. 24 hours (3 days).
3. 8 hours (1 day).
4. 16 hours (2 days).

**Dates:** 1. September 1974—January 1979.
2. January 1974—July 1975.
3. March 1975—April 1975.
4. September 1974—July 1979.

**Objective:** To provide students who have previous experience in management with an opportunity to apply relevant theory to practical situations.

**Instruction:** Utilization of conflict as a management tool; problem solving and decision making at an advanced management level; communications and motivation as factors in productivity. Instruction and training are accomplished through lectures, exercises, role playing, audiovisual aids, task force assignments, individual counseling, and followup.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Management (4/75).

## Management Practices for Experienced Supervisors

**Location:** Company headquarters, 4 Irving Place, New York, NY.

**Length:** 36 hours (1 week).

**Dates:** November 1980—Present.

**Objective:** To improve and upgrade the line supervisor's application of policies and procedures to his or her day-to-day operations; to improve the line supervisor's organizational effectiveness through self-assessment and the application of behavioral techniques.

**Instruction:** Handling incorrect employee practices; giving instructions; documentation and disciplinary procedures; labor relations; team building and achieving results through others; stress management; time management. Case studies, role-play activities, simulations, and self-assessment instruments are used throughout the course.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Management (8/81).

## Management Skills Training—Phase I (MD-8, HRIS-8550)

**Location:** Company headquarters, 4 Irving Place, New York, NY.

**Length:** 40 hours (1 week).

**Dates:** December 1971—Present.

**Objective:** To assist supervisors in developing basic managerial skills required for performing their job functions.

**Instruction:** Management philosophy; problem solving; leadership styles; employee motivation; labor relations; communications; self-awareness. Combination of managerial theory input with simulations, role playing, group discussions, and subgroup exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Management (4/75).

## Management Skills Training—Phase II (MD-8, HRIS-8552)

**Location:** Company headquarters, 4 Irving Place, New York, NY.

**Length:** 40 hours (1 week).

**Dates:** December 1971—Present.

**Objective:** To assist supervisors in identifying basic managerial responsibilities required for effective performance in a supervisory capacity.

**Instruction:** Combination of lectures on managerial responsibilities with role playing and group discussion. Emphasis on special topics such as equal employment opportunity, alcoholism and drug use, salary administration, problem solving, listening skills, and decision making.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Management (4/75).

## Managing Your Time

Refer to Interviewing Skills Workshop.

## Motivation Workshop (MD-6, HRIS-8558)

Refer to Management of Managers.

## Performance Appraisal Program (MD-11, HRIS-8562)

**Location:** Training facilities at division or department headquarters.

**Length:** 23 hours (15 weeks).

**Dates:** May 1973—Present.

**Objective:** To assist managers in effectively using a corporate performance review system as a managing tool to measure and improve performance, to increase productivity, and to motivate and develop subordinates.

**Instruction:** Techniques and application of job analysis and evaluation. Defining job segments; developing measurable performance standards; performance analysis; setting specific objectives; appraisal development interview.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 1 semester hour in Management (4/75).

## Presentation Skills

Refer to Interviewing Skills Workshop.

## Problem Solving Workshop (MD-18, HRIS-8566)

Refer to Management of Managers.

## POWER SUPPLY TRAINING CENTER

The Power Supply Training Center provides education and training programs for the major divisions of the company's Power Supply Department: Power Generation Operations, Power Generation Maintenance, and Central Substations. It is responsible for qualifying employees in the areas of steam, electricity, and maintenance of power plant mechanical equipment.

Source of official student records: Director, Power Supply Training Center, Consolidated Edison, Inc., 506 East 75th Street, New York, New York 10021.

### Advanced Power Plant Operator (PS-003)

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 80 hours (2 weeks).

**Dates:** January 1970—Present.

**Objective:** To provide instruction at the advanced level in the theory and practice of the operation of power plants, with an emphasis on the thermodynamics of power plant equipment.

**Instruction:** Energy and its units; physical measurements; theory and practice of lubrication; flue gas analysis and interpretation; pump operation and trouble diagnosis; heat transfer. (Prerequisite: Intermediate Power Plant Operator PS-002 or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Marine/Mechanical Engineering or Marine/Mechanical Technology (9/77).

### Basic Electrical and Mechanical Blueprint Reading

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 40 hours (1 week).

**Dates:** November 1975—Present.

**Objective:** To provide an overview of blueprint reading as it relates to the occupational requirements in electrical construction.

**Instruction:** Electrical and mechanical symbols; basic electrical circuits; logic circuits; one-line diagrams.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Construction Technology or Electrical Construction Maintenance (9/77).

### Basic Power Plant Operator (PS-001)

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 40 hours (1 week).

**Dates:** January 1970—Present.

**Objective:** To provide an introduction to steam power generation.

**Instruction:** History of power generation; power plant equipment; boilers; fuel; water and steam cycles; auxiliaries; turbines; condensers; generators; basic elements of combustion; electricity; safety practices.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Marine/Mechanical Engineering or Marine/Mechanical Technology (9/77).

### Basic Regulator and Control (PS-058)

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 40 hours (1 week).

**Dates:** June 1975—Present.

**Objective:** To provide an overview of the fundamental techniques of instrumentation.

**Instruction:** Temperature, pressure, and flow instrumentation, and their application in controls.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Basic Industrial Instrumentation (9/77).

### Control Room Procedures (PS-004B)

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 80 hours (2 weeks).

**Dates:** September 1967—Present.

**Objective:** To provide an understanding of the techniques necessary for the efficient and reliable operation of control rooms for boilers, turbines, auxiliaries, and generators.

**Instruction:** Boiler, turbine, and auxiliary equipment operation; generator operation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Marine/Mechanical Engineering or Marine/Mechancial Technology (laboratory) (9/77).

### 1. Electrical Fundamentals (PS-046)
### 2. Intermediate Electrical (PS-047)
### 3. Motor and Motor Controls (PS-047-1)

**Location:** Power Supply Training Center, 506 East

111

75th Street, New York, NY; other company locations.

**Length:** 1. 80 hours (2 weeks).
2. 120 hours (3 weeks).
3. 40 hours (1 week).

**Dates:** 1. September 1967—Present.
2. September 1967—Present.
3. January 1975—Present.

**Objective:** To provide a basic knowledge of electrical theory as it applies to the electrical maintenance field.

**Instruction:** AC and DC circuits; motors; generators; controls; troubleshooting.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 7 semester hours in Electrical Construction Maintenance (5 lecture, 2 laboratory) (9/77). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Fire Prevention and Protection (Introduction to Fire Prevention and Protection)

**Location:** Various company training facilities.

**Length:** 45 hours (15 weeks).

**Dates:** February 1979—Present.

**Objective:** To familiarize participants with the fundamentals of fire prevention and protection as related to accident prevention and property damage.

**Instruction:** Chemistry and physics of combustion; fire hazards of materials; industrial and process fire hazards; NFPA codes; OSHA standards; fire safety in building design; fire safety and building services; public and private fire protection; fire alarms and detection systems; extinguishing agents. Course format includes lecture, discussion, and demonstration.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Occupational Safety and Health (12/79).

### Industrial Hygiene (Introduction to Industrial Hygiene)

**Location:** Various company training facilities.

**Length:** 45 hours (15 weeks).

**Dates:** June 1976—Present.

**Objective:** To familiarize participants with the fundamental concepts of industrial hygiene and applicable OSHA standards.

**Instruction:** Industrial ventilation and exhaust; industrial illnesses; industrial toxicology; occupational noise hazards; ionizing and nonionizing radiation; physical stresses; human factors engineering. Course format includes lecture, discussion, and demonstration.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Occupational Safety and Health (12/79).

### 1. Instrument and Control Basic Course (PS-052)

### 2. Instrument and Control Intermediate Course (PS-053)

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 1. 80 hours (2 weeks).
2. 80 hours (2 weeks).

**Dates:** 1. March 1974—Present.
2. April 1974—Present.

**Objective:** To provide an understanding of the principles and practices of industrial instrumentation and control.

**Instruction:** Pressure, temperature, and flow instrumentation; theory of current and potential transformers; voltage, current, power, and resistance measurements; protective and operational relays.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Electromechanical or Mechanical Technology (3 lecture, 1 laboratory) (9/77). NOTE. Courses 1 and 2 must both be completed to receive credit.

### Instrument and Control Intermediate Course (PS-053)

Refer to Instrument and Control Basic Course (PS-052).

### Intermediate Electrical (PS-047)

Refer to Electrical Fundamentals (PS-046).

### Intermediate Power Plant Operator (PS-002)

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 80 hours (2 weeks).

**Dates:** January 1970—Present.

**Objective:** To provide instruction at the intermediate level in the theoretical and practical methods used in the operation of power plant equipment.

**Instruction:** Boiler construction; theory and practice of boiler combustion; theory, principles, and operation of steam turbines; condenser operation; properties of steam; types of test instruments; heat transfer; water treatment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Marine/Mechanical Engineering or Marine/Mechanical Technology (9/77).

### Job Instruction Training (PS-067-1)

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 40 hours (1 week).

**Dates:** June 1975—Present.

**Objective:** To provide the skills and techniques needed to give proper job instruction and to relate effectively to employees.

**Instruction:** Communications; public speaking; effective listening; characteristics of a good supervisor; human relations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Industrial Supervision (9/77).

## Motor and Motor Controls (PS-047-1)

Refer to Electrical Fundamentals (PS-046).

## Package Boilers (PS-015B)

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 80 hours (2 weeks).

**Dates:** January 1973—Present.

**Objective:** To provide an understanding of the construction and operation of package boilers.

**Instruction:** Package boiler construction and capabilities; properties of steam, heat transfer, and water treatment; operation of package boiler simulator; malfunctioning and troubleshooting pertaining to package boilers.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Marine/Mechanical Engineering or Marine/Mechanical Technology (9/77).

## Signature Analysis

**Location:** Power Supply Training Center, 506 East 75th Street, New York, NY; other company locations.

**Length:** 40 hours (5 weeks); additional 60 hours study working on a project.

**Dates:** May 1977—Present.

**Objective:** To provide the student with the knowledge and techniques needed to conduct spectrum analysis and evaluation of rotating machinery.

**Instruction:** Philosophy of signature analysis; vibration theory; harmonic analysis; spectrum analysis theory; theory of transducers; theory of spectrum analyzers, correct test procedure and report preparation; introduction to turbo-machinery blade vibration; introduction to acoustic emission. Final project and report required.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Mechanical Engineering (9/77).

## SPECIALIZED TRAINING

Specialized Training, a section of Personnel Administration of Consolidated Edison, has been in existence since 1968. It was originally established for the purpose of training new employees for a variety of entry-level positions through government-sponsored programs for the unemployed and underemployed.

Since that time, Specialized Training has also become involved in training for entry-level positions for several New York City corporations. A wide variety of evening courses and seminars are also provided, including Adult Basic Education, High School Equivalency, English and Spanish as Second Languages, Pre-Retirement Counseling, and college courses leading to associate's and bachelor's degrees.

Source of official student records: Training Administrator of Specialized Training, Consolidated Edison, Inc., 708 First Avenue, 8th Floor West, New York, New York 10017.

### Basics in Business Mathematics (ST 1.501)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 65 hours (13 weeks).

**Dates:** May 1976—January 1978.

**Objective:** To enable students to develop the fundamental mathematical principles and procedures required for a basic understanding of business mathematics.

**Instruction:** Concepts and operations applicable to whole numbers, fractions, decimals, and percentages, and the practical application of these principles to the business setting: valuing inventory; computing simple interest; preparing payrolls; computing percentages; computing base and rate; and selling at retail.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Accounting, Business Administration, Retail Business Management, or Secretarial Science (2/78).

### Basic Typing (ST 1.101)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 100-130 hours (13 weeks); individualized instruction.

**Dates:** June 1974—December 1977.

**Objective:** To provide the student with a basic knowledge of the typewriter and proper typing technique; to introduce the student to production typing.

**Instruction:** Mastery of the keyboard with a minimum attainment level of 35-40 words per minute on a five-minute timing with an error limitation of one error per minute; introduction to the typing of business letters, tabulations, manuscripts, memoranda, and envelopes; setting up business letters in different styles; acquisition of concomitant skills such as proofreading, proper techniques for making corrections, and dexterity in handling carbons. (Prerequisite: ability to type 15 words per minute.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Secretarial Science (2/78).

### Business Mathematics (ST 1.511)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 150 hours (30 weeks).

**Dates:** February 1978—June 1981.

**Objective:** To provide the student with an understanding of mathematical principles and procedures and their application to the business setting.

**Instruction:** Review of basic operations; decimals and percents; computing interest, commission and mark-up; payroll invoices and inventory; International System of Units Conversion; reconciling bank statements; taking trade and cash discounts; installment plan purchases; depreciation; detailing the most efficient method for setting up business and consumer mathematical problems for solution on the electronic calculator.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Accounting, Business Administration, Business Education, Retail Business Management, or Secretarial Science (2/78).

### Communication Arts for Business (ST 1.611)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 150 hours (30 weeks).

**Dates:** February 1978—June 1981.

**Objective:** To provide the student with a comprehensive knowledge of the language skills and communication procedures used in contemporary business settings.

**Instruction:** Introduction to business writing with emphasis placed on grammar and language skills, vocabulary enrichment, spelling reinforcement, composition of business letters, memoranda, reports, news releases, and telecommunications. Students will also be introduced to the preparation of resumes, the formulation of oral communications skills, and the development of critical judgments through literary writings dealing with the business world.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration, Business Communications, English, or Secretarial Science (2/78).

## Fundamentals of Accounting (ST 1.411)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 150 hours (30 weeks).

**Dates:** February 1978—June 1981.

**Objective:** To provide the student with an understanding of the accounting cycle from the recording and analyzing procedures through the summarizing procedures and the preparation of general purpose financial statements.

**Instruction:** Recording daily transactions in general journals and cash journals; preparation of trial balances; determining the significance of information found in financial statements, including balance sheets, income statements, and capital statements; payroll deductions; employers' taxes; individual tax returns; special journals and ledger accounts; sales tax; bad debts; depreciation, fixed assets; disposing of fixed assets; notes and interests; accrued income; expenses; business organizations, including sole proprietorships, partnerships, and corporations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Accounting, Business Administration, Business Education, or Secretarial Science (2/78).

## Office Procedures (ST 1.311)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 150 hours (30 weeks).

**Dates:** February 1978—June 1981.

**Objective:** To give students a knowledge of office procedures and the work done in an office through the use of simulated situations which will test the students' judgment and initiative, as well as their ability to make decisions and organize and plan work to meet specific deadlines.

**Instruction:** General office procedures, including filing, telephone techniques, reception and messenger work, organizing the work station, handling incoming and outgoing mail, using voice-writing equipment, recordkeeping, and making travel and meeting arrangements; development of desirable personal and professional qualities that will enable the beginning employee to work harmoniously with her/his immediate supervisor and coworkers; development of an understanding, appreciation, and positive attitude toward the importance of the office and the work done in it; training to enable students to handle executive responsibilities such as researching and assembling facts for reports, writing minutes of meetings, and determining priorities.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business Administration, Business Education, or Secretarial Science (2/78).

## Stenography I (ST 1.211)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 75 hours (15 weeks).

**Dates:** February 1978—June 1981.

**Objective:** To provide the student with an understanding of Gregg Diamond Jubilee Shorthand in order to develop skill in taking dictation of business letters and transcribing them.

**Instruction:** The course is designed for individuals who have had no previous instruction in shorthand. At the end of the course, students must be able to write unpracticed, unpreviewed shorthand at the minimum rate of 60 words per minute for three minutes and to transcribe this dictation with 95 percent accuracy within 30 minutes. Emphasis is placed on dictation for speed building, the use of reference sources in transcription to eliminate nonshorthand errors, and the understanding of business vocabulary through application in business correspondence.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Secretarial Science (2/78).

## Stenography II (ST 1.212)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 75 hours (15 weeks).

**Dates:** February 1978—June 1981.

**Objective:** To increase the student's stenographic speed on sustained dictation and to develop skill in transcription.

**Instruction:** Construction of outlines for unfamiliar words under the stress of timed dictation; proper use of the basic elements of transcription, which include spelling, punctuation, word usage, and typing style; taking simple office-style dictation, which includes short deletions, short insertions and changes, restorations, and short transpositions. At the end of the course, students must be able to write new-matter dictation at a minimum sustained speed of 80 words per minute for three minutes and to transcribe this material with 95 percent accuracy within 30 minutes.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper

division baccalaureate category, 3 semester hours in Secretarial Science (2/78).

### Stenoscript ABC Shorthand (ST 1.201)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 1. 65 hours (13 weeks).
2. 66 hours (22 weeks).

**Dates:** May 1976—June 1981.

**Objective:** To enable the student to take and transcribe dictation of typical office correspondence.

**Instruction:** Study of Stenoscript ABC Shorthand, enabling the student to take down an unpracticed, 160-word (two-minute) letter, containing frequently used business terms, dictated to her/him at 80 words per minute; reading such a letter back; supplying punctuation; transcribing the letter, using an appropriate format and correct spelling, with a rate of error not to exceed 5 percent.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Business Administration (2/78).

### Typing I (ST 1.111)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 150 hours (15 weeks).

**Dates:** February 1978—June 1981.

**Objective:** To enable the student to master the keyboard; to introduce the student to production typing.

**Instruction:** Mastery of the keyboard with a minimum attainment level of 35-40 words per minute on a five-minute timing with an error limitation of one error per minute; introduction to the typing of business letters, tabulations, manuscripts, memoranda, and envelopes; setting up business letters in different styles; acquisition of concomitant skills such as proofreading, proper techniques for making corrections, and dexterity in handling carbons; the development of habits of neatness, self-reliance, cooperation, dependability, industry, and promptness.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Secretarial Science (2/78).

### Typing II (ST 1.112)

**Location:** Specialized Training Center, 708 First Avenue, New York, NY.

**Length:** 150 hours (15 weeks).

**Dates:** February 1978—June 1981.

**Objective:** To develop high levels of skill in keyboard mastery; to prepare the student adequately for a career as a typist.

**Instruction:** Setting up of advanced business forms, letters, memoranda, tabulations, and envelopes; use of office simulations to provide practice in determining typing priorities; refinement of proofreading skills to include detection of typing errors; timings on production work to achieve a speed of 45-55 words per minute on a five-minute timing with an error limitation of one error per minute.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Secretarial Science (2/78).

## TECHNICAL TRAINING CENTER

Source of official student records: Administrator, Technical Training Center, Consolidated Edison, Inc., 178 Theodore Fremd Avenue, Rye, New York 10580.

### Advanced Automotive and Truck Technology (8777)

**Location:** Rye Training Center, 178 Theodore Fremd Avenue, Rye, NY.

**Length:** 160 hours (4 weeks).

**Dates:** February 1976—Present.

**Objective:** To train transportation personnel to perform advanced preventive maintenance and repair of automotive equipment and vehicles.

**Instruction:** Tune-up specifications; carburetion; ignition system; electrical system; brakes; inspection procedures; emission control. (Prerequisites: Basic Automotive Technology 8704 and Basic Electricity 8718.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Advanced Automotive Technology (4/76).

### Air Conditioning (8702)

**Location:** Vernon Training Center, 43-82 Vernon Boulevard, New York, NY.

**Length:** 160 hours (4 weeks).

**Dates:** May 1975—Present.

**Objective:** To train personnel in the operation, maintenance, and repair of air conditioning systems.

**Instruction:** Principles of air conditioning systems, including automotive vehicles; maintenance and repair; commercial air conditioning units; refrigerants; heating system components; wiring diagrams; control circuits; testing; accessories and electrical systems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Air Conditioning (4/76).

### Basic Automotive Technology (8704)

**Location:** Rye Training Center, 178 Theodore Fremd Avenue, Rye, NY.

**Length:** 200 hours (5 weeks).

**Dates:** January 1975—Present.

**Objective:** To train personnel to perform basic preventive maintenance and minor repair of automotive equipment and vehicles.

**Instruction:** Fasteners and couplings; basic physical principles; measuring devices; suspension systems; basic hand tools; electrical systems; engine operations; lubrication and cooling systems; transmission; drive shaft and axle operation; safety; tune-up; fuel and exhaust systems; power transmission and steering systems; brake; frame; suspension.

**Credit recommendation:** In the vocational certificate category, 6 semester hours in Basic Automotive Technology (4/76).

### Basic Blueprint Reading (8708)

**Location:** Vernon Training Center, 43-82 Vernon Boulevard, New York, NY.

**Length:** 160 hours (4 weeks).

**Dates:** May 1974—Present.

**Objective:** To train personnel to read and utilize basic blueprints.

**Instruction:** Reading and interpretation of basic blueprints, machine drawings, building drawings, electrical and pipe system drawings, and sheet metal drawings; sketching; schematics; symbols; units of measure; physical structure of metals.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Blueprint Reading (4/76).

### Basic Electricity (8718)

**Location:** Vernon Training Center, 43-82 Vernon Boulevard, New York, NY.

**Length:** 160 hours (4 weeks).

**Dates:** October 1975—Present.

**Objective:** To train personnel to maintain and repair basic electrical systems.

**Instruction:** Electrical symbols; electrical blueprints; circuits; measurements; multi meters; magnetism and induction; generators; wiring diagrams and motor controls; switches; circuit breakers; maintenance and safety.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Electricity (4/76).

### Building and Heating Ventilation (8770)

**Location:** Vernon Training Center, 43-82 Vernon Boulevard, New York, NY.

**Length:** 160 hours (4 weeks).

**Dates:** January 1975—Present.

**Objective:** To train personnel to repair, install, and maintain environmental equipment systems.

**Instruction:** Principles of air conditioning systems; maintenance and repair; commercial air conditioning units; refrigerants; heating system components; wiring diagrams; control circuits; testing; accessories and electrical systems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Air Conditioning (4/76).

### 1. Caterpillar Diesel Engine (8754)
### 2. Cummins Diesel Engine (8756)
### 3. Detroit Diesel Engine (8714)
### 4. Mack Diesel Engine (8760)

**Location:** Vernon Training Center, 43-82 Vernon Boulevard, New York, NY.

**Length:** 1. 40 hours (1 week).
2. 40 hours (1 week).
3. 40 hours (1 week).
4. 40 hours (1 week).

**Dates:** January 1976—Present.

**Objective:** To train personnel for the repair and maintenance of diesel-powered equipment.

**Instruction:** History and application; combustion engine theory, gasoline versus diesel; analysis of diesel engine air, exhaust, lubrication, cooling, and fuel injection systems; engine components; testing and diagnostics.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Diesel Engines (4/76). NOTE: Courses 1, 2, 3, and 4 must all be completed to receive credit.

### Cummins Diesel Engine (8756)

Refer to Caterpillar Diesel Engine (8754).

### Detroit Diesel Engine (8714)

Refer to Caterpillar Diesel Engine (8754).

### 1. Electric Ignition Systems (8757)
### 2. Fuel Conservation Program (8726)
### 3. Gasoline Engine Tune-Up (8775)

**Location: 1 & 2.** Vernon Training Center, 43-82 Vernon Boulevard, New York, NY. **3.** Rye Training Center, 178 Theodore Fremd Avenue, Rye, NY.

**Length:** 1. 40 hours (1 week).
2. 40 hours (1 week).
3. 40 hours (1 week).

**Dates:** February 1976—Present.

**Objective:** To train personnel in the diagnosis and repair of ignition systems and in the tune-up of gasoline engines.

**Instruction: Course 1:** Trouble-shooting and general operating principles of batteries and ignition system components. **Courses 2 & 3:** Fuel system fundamentals; principles of carburetion; vehicle emission control systems; diagnosis and tune-up.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Automotive Ignition Systems and Tune-Up (4/76). NOTE: Course 1 and either Course 2 or Course 3 must be completed to receive credit.

### Fleet Maintenance Management (8724)

**Location:** Rye Training Center, 178 Theodore Fremd Avenue, Rye, NY.

**Length:** 40 hours (1 week).

**Dates:** November 1974—Present.

**Objective:** To train supervisory and management personnel in programmed maintenance management.

**Instruction:** Data retrieval; truck and vehicle maintenance and replacement; vehicle inventory control; oil analysis; work sampling and productivity; training systems; preventive maintenance; organization and leadership.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Management (Fleet) (4/76).

### Fuel Conservation Program (8726)

Refer to Electric Ignition Systems (8757).

### Gasoline Engine Tune-Up (8775)

Refer to Electric Ignition Systems (8757).

### Mack Diesel Engine (8760)

Refer to Caterpillar Diesel Engine (8754).

### Mobile Hydraulics (8730)

**Location:** Rye Training Center, 178 Theodore Fremd Avenue, Rye, NY.

**Length:** 160 hours (4 weeks).

**Dates:** September 1975—Present.

**Objective:** To train personnel in the theory and operation of closed hydraulic systems.

**Instruction:** Principles of hydraulics; hydraulic pumps; flow; reservoirs; accessories; maintenance; valve operations; mobile circuits; hydrostatic drives; fluids; electrical circuits; repair.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Hydraulics (4/76).

### Pneumatic Technology (8778)

**Location:** Vernon Training Center, 43-82 Vernon Boulevard, New York, NY.

**Length:** 120 hours (3 weeks).

**Dates:** December 1975—Present.

**Objective:** To train personnel in the operation, maintenance and repair of pneumatic systems.

**Instruction:** Pneumatic principles; reciprocating air compressors; rotary air compressors; primary and secondary air treatment; piping, hoses, and fitting; control valves; pressure relief valves; cylinders; motors.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Pneumatics (4/76).

## TRAINING RESOURCES GROUP

Source of official student records: Training Administrator of Training Resources, Consolidated Edison, Inc., Room 947-S, 4 Irving Place, New York, New York 10003.

### Instructional Methods

**(Formerly Basic Train the Trainer Workshop)**

**Location:** Training facilities throughout the company.

**Length:** 80 hours (2 weeks).

**Dates:** January 1973—Present.

**Objective:** To provide the participant with knowledge of the techniques of instruction, course development, and testing needed to be an effective trainer.

**Instruction:** Techniques of presentation and obtaining feedback; the adult learner; setting and writing objectives; preparation of visuals; selection of media; test preparation, evaluation, and revision; human relations. Student presentations are critiqued by other participants and the instructors.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Educational Methods, Management (Elective), or Personnel Administration (8/76).

# CONTACT-SYRACUSE, INC.

Contact-Syracuse, Inc. is a crisis counseling ministry serving the residents of Onondaga County, New York and nearby areas. This service provides an all-purpose direct 24-hours-a-day, seven-days-a-week, telephone crisis counseling service. Personal counseling is available for persons who need immediate help beyond that which can be given by telephone.

Contact conducts a training program to give volunteers the skills necessary to effectively counsel by telephone in various crisis situations. It also offers workshops in the area of the applied behavioral sciences to interested persons in the community.

Source of official student records: Director, Office of Contact, 958 Salt Springs Road, Syracuse, New York 13224.

## Listening Skills for Telephone Counseling and Crisis Intervention

**Location:** 958 Salt Springs Road, Syracuse, NY.

**Length:** 53 hours (15 weeks); includes 8-hour practicum.

**Dates:** January 1971 – June 1981.

**Objective:** To train persons in lay counseling skills in order to serve as telephone counselors.

**Instruction:** Knowledge and intensive practice in telephone counseling. Attending and listening; problem solving; information gathering and giving; making referrals; crisis intervention, especially in possible suicide situations.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Social Science (6/76).

120

# CORNING GLASS WORKS

Corning Glass Works, with headquarters in Corning, New York, is the world's largest manufacturer of technical and specialty glass products. Worldwide sales exceed $1 billion annually from more than 60,000 products in the following markets: consumer goods, capital goods, original equipment manufacturers materials, and health and science products.

The Education and Training Department of the Personnel Division coordinates in-house educational programs for all employees. Courses are either developed by the training staff or purchased from outside sources to meet specific needs. Members of the Training Department staff, specialists from within the company, and outside experts instruct in more than 35 educational programs and seven trades training curricula.

Source of official student records: Director, Education and Training, Corning Glass Works, Corning, New York 14830.

## Basic Glass Technology (5000)

**Location:** Education and Planning Center, and alternate sites in Corning, NY.

**Length:** 24 hours (3 days).

**Dates:** December 1978—Present.

**Objective:** To provide participants who have varied backgrounds with an understanding of glass manufacturing processes.

**Instruction:** Glass structure and composition; raw materials; refractories and glass defects; mixing and melting; forming (pressing, blowing, and drawing); forming (laminated sheet); secondary processing; properties of glass. The course is presented by a team of eight corporate experts, and includes 19 hours of lectures and five hours of visits to three Corning plants.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Ceramic Engineering or Glass Science (12/78).

## Effective Presentations (8025)

**Location:** Education and Planning Center, Corning, NY; various international locations.

**Length:** 23 hours (3 days).

**Dates:** December 1978—Present.

**Objective:** To build participants' skills in preparing for and delivering formal presentations to groups.

**Instruction:** Assessing presentation skills; fundamentals of a presentation (open, body, and close); selecting, designing, and presenting visual aids; team presentations; answering questions. Videotape replay is used extensively to critique and polish the participants' skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Communications (12/78).

## Exceptional Administrative Skills (8412)

**Location:** Education and Planning Center, Corning, NY; various plant locations throughout the United States.

**Length:** 21 hours (3 days).

**Dates:** September 1977—Present.

**Objective:** To improve participants' administrative skills.

**Instruction:** Skills are developed in the following areas: problem solving; objective setting; time management; decision making; anticipating problems. Course format includes lecture, discussion and practical application through solution of cases.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Business Administration or Office Practices (12/78).

## Glass Technology (5050)

**Location:** Corning Community College, Corning, NY.

**Length:** 30 hours (15 weeks).

**Dates:** December 1968—Present.

**Objective:** To enable students to correlate structure-properties-composition relationships in glass, and relate glass chemistry and manufacturing processes to various glass products.

**Instruction:** Fundamentals of chemistry as related to glass raw materials and glass compositions; phase equilibrium; batch calculations; heterogeneous equilibrium; melting; forming; defects; refractories; optical, mechanical, electrical, and chemical properties. The lecture/discussion method is used. Laboratory work is *not* included.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Glass Science (12/78).

## Managerial Grid Seminar (8630)

**Location:** Education and Planning Center, Corning, NY; various plant locations throughout the United States.

**Length:** 50 hours (1 week).

**Dates:** December 1978—Present.

**Objective:** To enable participants to become more effective managers by understanding and analyzing various managerial styles, receiving feedback on their own managerial styles, and experimenting with different managerial styles.

**Instruction:** Managerial grid concepts; analysis of dominant and backup managerial styles; use of critique in building team effectiveness; organizational culture concepts; causes and resolutions of organizational conflict; study of personal grid styles. Through the use of case problems, role playing, team critiques, and team problem solving, participants are able to analyze their effectiveness as individuals and as part of a problem-solving team.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Behavioral Aspects of Management (12/78).

## Rational Problem Solving (Kepner–Tregoe) (8075)

**Location:** Education and Planning Center, Corning, NY; various plant locations throughout the United States.

**Length:** 33½ hours (1 week).

**Dates:** December 1978—Present.

**Objective:** To enable participants to develop skill in rational problem solving, problem anticipation, decision making, and organizing and setting priorities using the Kepner-Tregoe method.

**Instruction:** Students acquire a thorough understanding of the basic principles of problem analysis, potential problem analysis, decision analysis, and situational appraisal. The course involves seminars, small-group discussions, case studies, and written analyses of individuals' on-the-job application of the principles involved. Course participants are instructed either in the Genco (production/manufacturing-oriented) or Apex (administrative/management-oriented) program format.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Management (12/78).

## Strength of Brittle Materials (5015)

**Location:** Sullivan Park Research and Development Laboratories, Corning, NY.

**Length:** 27 hours (9 weeks).

**Dates:** December 1978—Present.

**Objective:** To provide participants with an understanding of the basic theory of the strength of materials, strength and properties measurements, guidelines for designing products, and the application of the theory of stress analysis to simple systems.

**Instruction:** Basic concepts of force; Hooke's Law; bending of beams; thermal stresses; strength of glass and glass-ceramics; photoelastic methods; strain gauges and instrumentation. All lectures are accompanied by laboratory demonstrations. Problem-solving exercises are assigned.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Strength of Materials for Engineers (12/78).

122

# CRAIG DEVELOPMENTAL CENTER

Craig Developmental Center, a unit of the New York State Office of Mental Retardation and Developmental Disabilities, is a rural facility offering services primarily to the mentally retarded. The Center is presently in the process of shifting its focus from institutional care of the mentally retarded to preparation of the mentally retarded for community living.

The Education and Training Department provides educational programs to individuals who serve clients either within the facility or in a community setting. Classes are offered as specific staff development needs are identified.

Source of official student records: Director of Education and Training, Craig Developmental Center, Sonyea, New York 14556.

## Medication Administration for Approved Medication Administration Personnel (B-2-10) (Administration of Medications)

**Location:** Craig Developmental Center, Sonyea, NY.

**Length:** 40 hours (2 weeks).

**Dates:** December 1978—Present.

**Objective:** To provide paraprofessionals with the knowledge and skills necessary to administer medications safely, including knowledge of therapeutic and side effects of commonly used drugs.

**Instruction:** Orientation to pharmacology including legal aspects; medical terminology; administration and recording of medications; overview of pharmaceutical actions, side effects, and dosages.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Nursing Sciences (10/79).

# CULINARY INSTITUTE OF AMERICA

The Culinary Institute of America provides preparation and training for individuals interested in careers in the food service/hospitality industry. The Institute's program of study leads to the awarding of an A.O.S. degree.

The Institute's teaching staff consists of professional culinarians with little or no training in teaching techniques. The course listed below was developed to provide staff instructors with an opportunity to improve their pedagogical skills.

The course is *not* part of the Institute's curriculum, which cannot be evaluated through this program. It is offered *only* to staff members.

Source of official student records: Registrar, Culinary Institute of America, Hyde Park, New York 12538.

## Associates Educational Skills Seminar

**Location:** Culinary Institute of America, Hyde Park, NY.

**Length:** 24 hours (4 weeks).

**Dates:** October 1976—December 1978.

**Objective:** To enable staff instructors to upgrade and improve their instructional skills.

**Instruction:** Overview of the purpose, rules, and ethics of teaching; course outlines and objectives; lecture techniques; demonstration techniques; grading and evaluation; test construction; support materials; discipline; student motivation; questioning techniques. The course includes taped lectures, follow-up discussions, observations of each participant teaching a regular class, and individual consultations with the course instructor.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Vocational Education Methods (5/77).

# DISTRICT COUNCIL 37
# AMERICAN FEDERATION OF STATE, COUNTY, AND MUNICIPAL EMPLOYEES, AFL-CIO

District Council 37 is the New York City affiliate of the American Federation of State, County and Municipal Employees, AFL-CIO. The Union, largest of the civil service unions in New York, represents 120,000 employees of the City and related agencies. Its membership includes the 25,000 clerks who staff all city agencies, park and highway maintenance workers, librarians, zoo keepers, social service workers, and a wide range of other positions.

The Union's Education Department not only engages in traditional trade union education and leadership training, but through its education fund operates a large and varied program of education and training and career development. The fund, which was established in 1971, is operated by an independent Board of Trustees which employs staff and directs the programs according to the terms of a trust agreement established by the Union and the City's Department of Personnel. The job titles covered by the education fund tend to be entry level and/ or low skilled with low wages.

Source of official student records: Administrator, Education Fund, District Council 37, AFSCME-AFL-CIO, 140 Park Place, New York, New York 10007.

## Communication Within the Helping Role (IM-4)

**Location:** 140 Park Place, New York, NY.

**Length:** 45 hours (15 weeks).

**Dates:** January 1978—May 1978.

**Objective:** To provide students with basic training in communication skills.

**Instruction:** Styles, types, and problems of communication in the helping role; verbal and nonverbal communication; the helping role, climate, and process; the interview. Development of communication skills through practical class exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Communication (1/78).

## Disadvantaged Urban Population (IM-2)

**Location:** 140 Park Place, New York, NY.

**Length:** 45 hours (15 weeks).

**Dates:** September 1977—January 1978.

**Objective:** To provide students with an understanding of the causes and consequences of poverty as it impacts on selected urban populations.

**Instruction:** Causes and consequences of poverty in urban settings; disadvantaged populations, including immigrants, migrants, women, children, and the aged; analysis of, and comparison among, these groups; overview of human development and of major social institutions; responses to poverty within the social and economic context of New York City.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Sociology or Urban Studies (1/78).

## Roots of the New York City Welfare System: Conflicts, Ideas, and Policies (Introduction to Social Welfare) (IM-1)

**Location:** 140 Park Place, New York, NY.

**Length:** 45 hours (15 weeks).

**Dates:** September 1977—January 1978.

**Objective:** To provide students with an overview of the historical and political context in which public welfare systems function.

**Instruction:** Public welfare programs; poverty; definitions and theories of the causes of poverty and how each determines the way of dealing with poverty; historical and philosophical background of poverty, from early methods of coping with the poor to current controversies in public assistance and welfare reform proposals; examination of welfare in New York City.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Social Welfare (1/78).

## Selected Programs and Procedures of the Human Resources Administration in New York City (IM-3)

**Location:** 140 Park Place, New York, NY.

**Length:** 45 hours (15 weeks).

**Dates:** January 1978—May 1978.

**Objective:** To provide students with an understanding of New York City's Human Resources Administration through a study of selected programs and procedures of that agency.

**Instruction:** Laws, regulations, and policies governing the operation of the Human Resources Administration of the City of New York, with special emphasis on the Department of Social Services, the Office of Case Intake and Management, the Agency for Child Development, and the Department of Family and Adult Services.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Human Services (1/78).

# EASTERN MASSACHUSETTS ASSOCIATION OF LAND SURVEYORS, INC.

The Eastern Massachusetts Association of Land Surveyors, Inc. is a professional society serving all of eastern Massachusetts except Cape Cod. The organization is an integral part of the Massachusetts Association of Land Surveyors and Civil Engineers, and is an affiliate of the American Congress on Surveying and Mapping. The Association was established in 1950 as a nonprofit organization dedicated to the advancement of the surveying profession.

In 1971 the Association started the School of Survey. Originally designed for the training of members of the Association, its offerings are now available on a national and even international basis to meet the continuing education needs of the profession. The original emphasis on lecture courses has now shifted to the correspondence method of instruction.

Source of official student records: Director, School of Survey, Eastern Massachusetts Association of Land Surveyors, Inc., Suite 1110, 80 Boylston Street, Boston, Massachusetts 02116.

## Advanced Surveying Math I (A-1)

**Location:** Correspondence.

**Length:** Nine assignments.

**Dates:** February 1978—June 1981.

**Objective:** To introduce the student to some of the more difficult mathematical problems in dealing with surveying data.

**Instruction:** Trial and error solutions; line-line, curve-line, and curve-curve intersection determinations; complex highway geometry; precision; state plane coordinate system conversions; introduction to public land survey.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Surveying (2/78).

## Advanced Surveying Math II (A-2)

**Location:** Correspondence.

**Length:** Nine assignments.

**Dates:** February 1978—June 1981.

**Objective:** To enable the student to understand some of the mathematical problems encountered in reducing surveying data.

**Instruction:** Three-point resections; spiral curves; probable error determinations; volumes around curves; earthworks.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Surveying (2/78).

## Drainage for Surveyors (D)

**Location:** Correspondence.

**Length:** Nine assignments.

**Dates:** February 1978—June 1981.

**Objective:** To provide the student with a working knowledge of the elements of drainage design.

**Instruction:** Hydraulics, including flow characteristics, hydraulic profiles, surcharge, head loss due to friction, formulas for flow in gravity conduits, and scouring velocities; estimating stormwater runoff; drainage areas; layout of drainage piping systems; load factors. A design project is included with ten problem sets.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Civil Engineering, Forestry, or Survey Engineering (2/78).

## 1. Intermediate Surveying I (I-1C)

## 2. Intermediate Surveying II (I-2C)

**Location:** Correspondence.

**Length:** 1. Nine assignments.
2. Nine assignments.

**Dates:** February 1978—June 1981.

**Objective:** To provide the student with an understanding of the calculations involved in plane survey networks and the ability to use them.

**Instruction: Course 1:** Theory of precision and errors; traverse computation and adjustment; coordinate computation and plotting; areas; magnetic declination; earth curvature and refraction; peg test for levels with adjustment technique; computation and layout of simple curves. **Course 2:** Horizontal and vertical curves; sight distances; offsets; land descriptions; computation of end-areas and volumes; areas of curve segments, sectors, and externals.

**Credit recommendation: Course 1 alone:** In the lower division baccalaureate/associate degree category, 1 semester hour in Surveying (2/78). **Course 2 alone:** In the lower division baccalaureate/associate degree category, 1 semester hour in Surveying (2/78). **Both courses together:** In the lower division baccalaureate/associate degree category, 3 semester hours in Surveying (2/78).

## Intermediate Surveying II (I-2C)

Refer to Intermediate Surveying I (I-1C).

## Photogrammetry (P-1C)

**Location:** Correspondence.
**Length:** Nine assignments.
**Dates:** February 1978—June 1981.

**Objective:** To provide the student with an introduction to the use of aerial photogrammetry as a tool for topographic mapping.

**Instruction:** Photographic principles; basic measurement techniques; the geometry of a vertical aerial photograph; flight planning; ground control; mosaics; radial-line triangulation; introduction to stereoplotting instruments.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Surveying (2/78).

# EASTMAN KODAK COMPANY

The Eastman Kodak Company, headquartered in Rochester, New York, is among the 25 largest American companies and is the world's leader in photography. A highly diversified company, Kodak has marketing and distribution facilities around the globe, and manufacturing locations in 10 countries. The company employs 48,000 people in the Rochester area, and the worldwide company employment total is 120,700.

Kodak sponsors many courses for its employees to help insure sound and adequate training both for the person's present work and for future responsibilities which may be undertaken. Thorough on-the-job training is provided for all positions. In the various Kodak units, vocational, technical, professional, photographic, and management training is also provided according to the needs of the individual and the company.

Each division of the company has an active training or education department. It is these departments which arrange or conduct the courses listed below. A corporate training staff serves in liaison capacity between the divisional units and outside agencies.

Source of official student records: Director, Company Training, Eastman Kodak Company, 343 State Street, Rochester, New York 14650.

## Effective Education Seminar

**Location:** Marketing Education Center, Rochester, NY; Marketing Education Center, Atlanta, GA; Marketing Education Center, San Francisco, CA.

**Length:** **Version 1:** 50 hours (5 days); residential.
**Version 2:** 70 hours (7 days); residential.

**Dates:** **Version 1:** May 1974-November 1980.
**Version 2:** December 1980—Present.

**Objective:** To provide persons responsible for directing or conducting training with the ability to analyze performance problems systematically and to design and implement solutions to such problems.

**Instruction:** Systems approach to performance analysis and instructional design. Procedures are prescriptive rather than proscriptive; they enable a student to conduct a systematic problem analysis, to consider educational (and noneducational) solutions to performance problems, and to make basic decisions as to cost-effectiveness.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Education (5/74).

## 1. Fundamentals of Computer Programming
## 2. Fundamentals of Computers and Data Processing

**Location:** Kodak Park Division, Rochester, NY.

**Length:** 48 hours (8 weeks).

**Dates:** September 1971—Present.

**Objective:** To provide students with knowledge of basic computer concepts and programming techniques prior to language courses.

**Instruction: Course 1:** Introduction to the various elements of computer program development. Importance of proper problem definition and planning to meet specific objectives; flowcharting used to represent the analysis and logical operations necessary to solve the problem; graphic solution then translated into coded instructions in a pseudoprogramming language; record layout design; data organization; systems and program documentation; operating systems concepts. **Course 2:** Background of basic concepts of processing data. Data representation and recording; computer equipment; how the computer is instructed to perform its task, and how this tool can assist in problem solving and providing information. Exercises and case studies are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Introduction to Computer Programming (5/74). NOTE:Courses 1 and 2 must both be completed to receive credit.

## Fundamentals of Computers and Data Processing

Refer to Fundamentals of Computer Programming.

## Fundamentals of Optical Engineering

Refer to Practical Optics.

## Instructional Process Workshop

**Location:** Marketing Education Center, Rochester, NY; Marketing Education Center, San Francisco, CA.

**Length:** Individualized program combining lecture, laboratory, and independent study (35-50 hours).

**Dates:** May 1973—August 1979.

**Objective:** To develop basic teaching skills for marketing education specialists in preparation for their first training assignments.

**Instruction:** Basic course in instructional technology, with an introduction to educational psychology, learning theory, and instructional strategies. Objectives; learning strategy; adult learning principles; developing a teaching plan; developing teaching materials; educational development process; media production process; logistical support process; presentation techniques; evaluation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Education (5/74).

### Photographic Science for New Professional Technical People

**Location:** Kodak Park Division, Rochester, NY.

**Length:** **Version 1:** 60 hours (12 weeks).
**Version 2:** 55 hours (11 weeks).
**Version 3:** 60 hours (12 weeks).

**Dates:** **Version 1:** September 1968—September 1976.
**Version 2:** October 1976--September 1979.
**Version 3:** September 1979—Present.

**Objective:** To provide new scientific and engineering personnel with the fundamentals of photographic science, theory, and technology early in their company careers.

**Instruction:** Study of photographic science, practices, theory, and technology. History of photography and description of the general photographic process, film, and paper manufacturing; negative-positive and reversal processes; emulsion composition, sensitometry and latent image theory; processing chemistry, image evaluation, exposure effects, and processing effects; spectrophotometry; color vision, color mixing, and principles of color photography; color films, papers, and processes; color sensitometry, dye behavior, and colorimetry; elements of duplicating and masking.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Photographic Science (5/74).

### Photographic Technology I

**Location:** Photographic Training Area, Kodak Apparatus Division, Rochester, NY.

**Length:** 36 hours (6 weeks); additional 40 hours of individual study.

**Dates:** March 1971—Present.

**Objective:** To provide the basic fundamentals of photographic technology to company employees whose jobs involve the use of knowledge of photographic materials, apparatus, and processes.

**Instruction:** Black and white photography, its materials, processes, and apparatus. Nature and behavior of light; camera exposure; processing and printing; photographic films and papers; latent image theory; sensitometry; chemistry; exposure and development effects and their application to current still and motion picture products. Multi-media learning experience, utilizing lecture and self-teaching instruction and hands-on training.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Basic Photography (5/74).

### Practical Optics

**(Formerly Fundamentals of Optical Engineering)**

**Location:** Kodak Apparatus Division, Rochester, NY.

**Length:** **Version 1:** 34 hours (15 weeks).
**Version 2:** 30 hours (15 weeks); additional 20 hours of individual study.

**Dates:** **Version 1:** December 1966—August 1981.
**Version 2:** September 1981—Present.

**Objective:** To provide engineers and staff personnel with a better understanding of optical principles and systems.

**Instruction:** Basic optical systems; refraction and reflection of light; magnifiers; properties of lenses, mirrors, and prisms; images and their formation; optical instruments; image brightness, projection systems, aperture stops, aberrations, vision, and lens manufacture.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Elementary Optical Engineering (5/74).

### Technical Mathematics I

**Location:** Kodak Park Division, Rochester, NY.

**Length:** 40 hours (10 weeks).

**Dates:** March 1972—June 1976.

**Objective:** To provide skilled trade apprentices with a course that can be applied to meet the mathematics requirements in an A.A.S. degree program (e.g., Electrical Technology, Mechanical Technology).

**Instruction:** Algebraic expressions and fundamental operations; linear equations and inequalities in one variable; analytic geometry in the plane (ordered pairs, coordinate systems, linear functions); angles and angle measurement, trigonometric functions, and trig functions of any angle; graphs of the trig functions, systems of equations and inequalities (two equations in two unknowns and three equations in three unknowns).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Technical Mathematics (5/74).

### Technical Mathematics II

**Location:** Kodak Park Division, Rochester, NY.

**Length:** 40 hours (10 weeks).

**Dates:** March 1972—June 1976.

**Objective:** To provide skilled trade apprentices with a course that can be applied to meet the mathematics requirements in an A.A.S. degree program (e.g., Electrical Technology, Mechanical Technology).

**Instruction:** Trigonometric formulas and oblique angles; vectors; laws of sines and cosines; complex numbers; quadratic equations and inequalities; verbal problems; theory of equations; logarithmic and exponential functions; conic sections (circle, parabola, ellipse, hyperbola).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Technical Mathematics (5/74).

# EBASCO SERVICES INCORPORATED

Ebasco Services Incorporated, a leading engineering, construction, and consulting firm, has been servicing the electric utility industry since 1905.

Located at the corporate headquarters in New York City, the Human Resources Department conducts a broad range of professional and management development courses to meet the needs of both management and nonmanagement personnel. The courses range from supervisory training and management skills development to job enrichment. In a typical year, Ebasco employees total 40,000 hours of formal training and development.

Source of official student records: Administrator of Instructional Design and Services, Human Resources Department, Ebasco Services Incorporated, 2 World Trade Center, New York, New York 10048.

## 1. Basic Planning and Scheduling With CPM (MS-2)
## 2. The Ebasco Project Management System (MS-4)
## 3. The Ebasco Scheduling System (MS-3)

**Location:** Corporate Training Center, New York, NY; various locations throughout the United States.

**Length:** 1. 5 hours (1 day).
2. 7 hours (1 day).
3. 7½ hours (1 day).

**Dates:** 1. July 1976—Present.
2. August 1978—Present.
3. February 1977—Present.

**Objective: Course 1:** To provide participants with an introduction to, and basic understanding of, a CPM network. **Course 2:** To provide participants with an understanding of the nature of the project management system. **Course 3:** To provide participants with a knowledge and understanding of network methodology and project organization.

**Instruction: Course 1:** Introduction to CPM; network rules; network details; early and late start dates; event slack time; critical path; future applications of CPM. **Course 2:** Organization alternatives; matrix as an alternative; sustaining skills in a matrix; problem identification in a matrix. **Course 3:** Evaluation of network methods; project organization; planning and scheduling concepts; development and maintenance; logic planning; time planning; resource planning; project scheduling; schedule report and maintenance; project control and monitoring; project schedule criteria; project analysis meeting; system parameters.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Business Administration or Operations Management (1/81). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

## The Ebasco Project Management System (MS-4)

Refer to Basic Planning and Scheduling With CPM (MS-2).

## The Ebasco Scheduling System (MS-3)

Refer to Basic Planning and Scheduling With CPM (MS-2).

## Effective Oral Presentations (PD-1)

**Location:** Corporate Training Center, New York, NY; various locations throughout the United States.

**Length:** 16 hours (4 weeks).

**Dates:** August 1978—Present.

**Objective:** To help participants develop skills for organizing and delivering persuasive business presentations.

**Instruction:** Acquisition of basic skills and confidence needed to speak persuasively. Identification of present skill level; audience control; visual movement; organizing thoughts; use of a lectern; strategies for handling questions. Videotapes are used throughout the course for diagnosis.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 1 semester hour in Oral Communication (5/81).

## 1. Effective Time Management (MD-7)
## 2. Objectives, Priorities, and Planning (MD-9)
## 3. Task Force Problem Solving (MD-8)

**Location:** Corporate Training Center, New York, NY; various locations throughout the United States.

**Length:** 1. 10 hours (1 week).
2. 10 hours (1 week).
3. 15 hours (1 week).

**Dates:** 1. January 1980—Present.
2. August 1979—Present.
3. February 1979—Present.

**Objective: Course 1:** To provide participants with an introduction to the theory of time management. **Course 2:** To enable participants to develop specific objectives and establish priorities toward creating a plan of action. **Course 3:** To provide participants with a knowledge and understanding of alternative structures in task force management and problem solving.

**Instruction: Course 1:** Concept of time management; psychology of time management; delegation;

developing a plan. **Course 2:** Characteristics and writing of objectives; priority setting and its application to objectives; general principles of planning; individual planning for accomplishment of objectives. **Course 3:** Concept of the task force; collateral ground rules; product of a task force; systematic problem solving; presentation of the plan.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Business Administration or Management (1/81). NOTE: Courses 1, 2, and 3 must all be completed to receive full credit. If Course 3 is taken alone, 1 semester hour is recommended.

## Labor Relations (MS-6)

**Location:** Corporate Training Center, New York, NY; various locations throughout the United States.

**Length:** Self-directed study (approximately 12 hours); an additional 4 hours of seminars.

**Dates:** June 1979—Present.

**Objective:** To provide participants with an introduction to labor relations problems and correctional procedures in an industrial setting.

**Instruction:** Labor relations policy and practices in industry; labor law and legislation in industry; hiring and employment procedures; human relations.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Business Administration or Labor Relations (1/81).

## 1. Management of Meetings (MD-13)
## 2. Performance Feedback and Appraisal (MD-1)
## 3. Selection Interviewing and College Recruiting (MS-7)
## 4. Selection Interviewing for Supervisors (MS-10)

**Location:** Corporate Training Center, New York, NY; various locations throughout the United States.

**Length:** 1. 5 hours (1 day).
2. 10 hours (1 week).
3. 10 hours (1 week).
4. 10 hours (2 weeks).

**Dates:** 1. February 1980—Present.
2. November 1979—Present.
3. February 1979—Present.
4. February 1980—Present.

**Objective: Course 1:** To enable participants to plan and manage a meeting. **Course 2:**To provide participants with a knowledge and understanding of the need for improved communication and feedback to help increase productivity levels and to identify roles played by the manager in the performance appraisal process. **Course 3:**To introduce participants to information-gathering and evaluating skills in the selection interview process. **Course 4:** To introduce participants to information-gathering and evaluating skills in the placement interview process.

**Instruction: Course 1:** Determining when meetings should be used; the planning process; implementing the meeting; leadership and group behavior; techniques of active participation; post-meeting follow-through. **Course 2:** Feedback and its effect on performance; timing of feedback; responsibilities of the supervisor when giving feedback; job standards; performance analysis; transactional analysis. **Course 3:** Selection interview process; structure of the selection interview; information gathering; issues in the selection interview process; conducting the selection interview. **Course 4:** Selection interviewing; preparing for the interview; structuring the interview.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Administration or Management Communication Skills (1/81). NOTE: Courses 1, 2, 3, and 4 must all be completed to receive full credit. If Course 2 is taken alone, 1 semester hour is recommended.

## Objectives, Priorities, and Planning (MD-9)

Refer to Effective Time Management (MD-7).

## Performance Feedback and Appraisal (MD-1)

Refer to Management of Meetings (MD-13).

## Report Writing (PD-4)

**Location:** Corporate Training Center, New York, NY; various locations throughout the United States.

**Length:** 15 hours (4 weeks).

**Dates:** June 1981—Present.

**Objective:** To enable participants to prepare technical or managerial reports that are well-organized, effectively developed, and carefully edited.

**Instruction:** Elements of a formal report; gathering research material; ways of getting started; methods of exposition; editing for content, clarity, and form.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 1 semester hour in Report Writing (5/81).

## Selection Interviewing and College Recruiting (MS-7)

Refer to Management of Meetings (MD-13).

## Selection Interviewing for Supervisors (MS-10)

Refer to Management of Meetings (MD-13).

## Supervisory Development Program (MD-10)

**Location:** Corporate Training Center, New York, NY; various locations throughout the United States.

**Length:** 45 hours (11 weeks).

**Dates:** March 1980—Present.

**Objective:** To provide supervisors with an introduction to the management process and basic management skills.

**Instruction:** The management process; planning, organizing, controlling, and coordinating; problem solving and decision making; leadership styles; communication and feedback; delegation; coaching and counseling; groups and peers.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Management (1/81).

## Task Force Problem Solving (MD-8)

Refer to Effective Time Management (MD-7).

## Workshop in English Composition (PD-8)

**Location:** Corporate Training Center, New York, NY; various locations throughout the United States.

**Length:** 40 hours (6 weeks).

**Dates:** December 1978—Present.

**Objective:** To help participants whose native language is not English deal with their own writing problems and apply the techniques needed to produce clear, effective business prose.

**Instruction:** Acquisition of English language skills related to good business writing. Through a series of writing exercises participants learn to improve their style, punctuation, and organization of ideas. Case study format is used. An additional 15 hours is devoted to "The Silent Way" method of identifying English sounds.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Writing (5/81). NOTE: Credit is *not* recommended for participants who have already received credit for Written Business English PD-6.

## Written Business English (PD-6)

**Location:** Corporate Training Center, New York, NY; various locations throughout the United States.

**Length:** 25 hours (5 weeks).

**Dates:** May 1978—Present.

**Objective:** To help participants deal with their writing problems and apply the techniques needed to produce clear, effective business prose.

**Instruction:** Acquisition of skills related to good business English. Through a series of writing exercises participants learn to improve their style, punctuation, and organization of ideas. Case study format is used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Writing (5/81). NOTE: Credit is *not* recommended for participants who have already received credit for Workshop in English Composition PD-8.

# THE EMBROIDERERS' GUILD OF AMERICA, INC.

The Embroiderers' Guild of America, Inc. is a nonprofit educational organization founded in 1958. Its purpose is to set and maintain high standards of design, color, and workmanship in all kinds of embroidery. It is a membership organization, with 24,000 members and 240 local chapters nationwide.

EGA's Educational Services offer a varied correspondence course curriculum in embroidery to men and women of all ages. Courses offer a program of intensive study, under supervision of teachers chosen for outstanding ability in their field of embroidery and for teaching excellence.

Source of official student records: Registrar, Embroiderers' Guild of America, Inc., 6 East 45th Street, Room 1301, New York, New York 10017.

## Foundation in Color

**Location:** Correspondence program administered from EGA headquarters.

**Length:** Independent study.

**Dates:** March 1978—Present.

**Objective:** To provide students with a technical background in color principles as related to the fiber arts.

**Instruction:** Synthesis of color theory, and analysis of aspects; perceptual problems of color; modes of color organization; color composition in practice; emotive, psychological, and symbolic meanings of color; the historical evolution of color. Students are required to apply color and design principles in original color sketches and completed fiber pieces.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Color Theory (10/81).

## Teachers' Certification Program in Selected Areas (Blackwork, Canvaswork, Crewel, Embroidery as a Contemporary Expression, Pulled Thread, Quilting, Silk and Metal, and Stumpwork)

**Location:** Correspondence program administered from EGA headquarters.

**Length:** Independent study.

**Dates:** October 1975—Present.

**Objective:** To provide students with an opportunity to demonstrate knowledge of needle art history, technical competence within a specific area of needle art, and skill in teaching a specific area of needle art.

**Instruction:** Six-part assessment program in which students are required to: submit a portfolio of technical samples; prepare a teaching bibliography, instructional aids, and lesson plans; write a historical survey of their chosen needle art area. Students receive written critiques on all submitted work. Teaching competence of students is evaluated through use of audiotapes and classroom observation in actual teaching situations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Research in Art Education and 2 semester hours in Studio Art, and in the upper division baccalaureate category, 2 semester hours in Art Education Practicum. NOTE: If a student completes the course in more than one needle art area, duplicate credit may be awarded in the Research in Art Education and Studio Art categories. Duplicate credit should *not* be awarded in the Art Education Practicum category.

# EQUITABLE LIFE ASSURANCE SOCIETY OF THE UNITED STATES

The Equitable Life Assurance Society of the United States is one of the leading insurers in the nation, with assets in excess of $20 billion. Conducting business in all 50 states, the District of Columbia, and Puerto Rico, the Equitable employs about 13,200 salaried people, and its sales force numbers 8,000.

The Corporate Computer Services area provides technical training courses in programming, systems analysis, and other data processing-related skills to all areas of the Society. Courses are conducted during normal working hours at the corporate headquarters in New York City.

Source of official student records: Manager of EDP Training, The Equitable Life Assurance Society, 1285 Avenue of the Americas, New York, New York 10019.

### Advanced Job Control Language and Utilities.

Refer to Job Control Language and Utilities.

### ANS COBOL Coding and Workshop

**Location:** 1285 Avenue of the Americas, New York, NY.

**Length:** 147 hours (4 weeks).

**Dates:** January 1969—February 1979.

**Objective:** To enable the student to develop a working capability in the use of the COBOL language and the coding of programs, and to introduce advanced techniques.

**Instruction:** Introduction to the ANS COBOL language; presentation of the four divisions of the language; detailed analysis of the data and procedure divisions; COBOL internal sort; table handling; dumps; LIBRARIAN; subprogram linkage; indexing. Extensive business problems are solved through the use of the ANS COBOL language.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 5 semester hours in Business Administration, Business Data Processing, or Computer Science (3 lecture, 2 laboratory) (10/76).

### Data Processing Concepts

Refer to Introduction to Data Processing.

### Introduction to Data Processing
### 1. Data Processing Concepts
### 2. Program Logic Through Flowcharting

**Location:** 1285 Avenue of the Americas, New York, NY.

**Length:** 1. 35 hours (1 week).
2. 70 hours (2 weeks).

**Dates:** January 1974—February 1979.

**Objective:** To provide the student with an understanding of the fundamentals of data processing, basic flowcharting techniques, and problem-solving approaches.

**Instruction:** History of computers; data representation; functional parts of the computer; concepts of machine language and assembly language. Through the technique of flowcharting, the following topics are covered: file processing requirements; loop control; printer requirements; sequence checking; control break processing; subroutine logic; editing; print routine logic; master file updating; subscripting; table searching.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Business Administration, Business Data Processing, or Computer Science (3 lecture, 1 laboratory) (10/76). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Introduction to Job Control Language

Refer to Job Control Language and Utilities.

### Job Control Language and Utilities
### 1. Introduction to Job Control Language
### 2. Advanced Job Control Language and Utilities

**Location:** 1285 Avenue of the Americas, New York, NY.

**Length:** 1. 14 hours (2 days).
2. 28 hours (4 days).

**Dates:** January 1974—Present.

**Objective:** To prepare the student to use OS Job Control Language Commands and selected utility programs.

**Instruction:** Supervisory control programs (job, task, and data management); job control language; catalogued procedures; sort merge; linkage editor; peripheral support system and selected utility programs.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Administration, Business Data Processing, or Computer Science (10/76). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Program Logic Through Flowcharting

Refer to Introduction to Data Processing.

## Systems Analysis Techniques

**Location:** 1285 Avenue of the Americas, New York, NY.

**Length:** 90 hours (3 weeks).

**Dates:** January 1971—Present.

**Objective:** To prepare the student to perform computer systems analysis and design functions within the context of a systems development methodology.

**Instruction:** Feasibility studies; depth studies of existing systems; business system designs; forms designs; computer system designs; file conversions; external procedures and installation; oral and written communications; interviewing; project planning and control. Extensive laboratory exercises are included.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Business Data Processing, Computer Science, or Management (10/76).

# FEDERAL AVIATION ADMINISTRATION

The Federal Aviation Administration (FAA), a component of the United States Department of Transportation, serves primarily to insure aviation safety, promote air commerce, and support national security through management of the National Airspace System. Training programs are offered to employees in each of the 11 FAA regions in the United States, in the Washington headquarters and in the FAA's two specialized centers.

Source of official student records: Registrar Unit, AAC-911A, Federal Aviation Administration Academy, Aeronautical Center, P.O. Box 25082, 6500 South MacArthur, Oklahoma City, Oklahoma 73125.

## Air Traffic Control Specialist (Station-Instruction)

**(This is a job classification, *not* a course title.)**

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** Minimum of 3,540 hours (2 years).

**Dates:** May 1969—June 1981.

**Objective:** To provide an extensive supervised experience in classroom instruction and course development for FAA Academy staff.

**Instruction:** The typical instructor at the FAA Academy is a journeyman specialist selected for assignment to the Academy on the basis of superior competency in his/her field. After undergoing training in basic instructional methods, the person is given responsibility for both lecture/discussion and laboratory sessions. Normally instructors are also required to complete an advanced course in instructor training within a year of assignment to the Academy. The person teaches for a minimum of two years at the Academy, during which time his/her performance is regularly and carefully critiqued in terms of rigorous instructor performance standards. In addition, if the instructor is assigned to the Academy's Development/Revision Unit after one year of teaching, the person is responsible for the development of curriculum, and instructional and testing materials, including audiovisual aids, lesson plans, course outlines, reference materials, lab guides, and individualized instructional materials. The person's performance in this unit is regularly and carefully evaluated, and additional training is provided by a supervisor or through additional classroom study as needed.

**Credit recommendation: For Instructors Only:** Equivalent to a college-supervised student teaching field experience in secondary or postsecondary education. **For Instructors Assigned to Development/Revision Unit:** Equivalent to a college-supervised student teaching field experience in secondary or postsecondary education, and in the upper division baccalaureate category, 6 semester hours in Curriculum and Instruction or Educational Administration (5/79).

## AIRWAY FACILITIES TRAINING PROGRAM

The courses listed below are part of the extensive training program of the Airway Facilities Service, which is responsible for the development, installation, and maintenance of National Airspace System facilities and electronic equipment that aid air navigation. The Airway Facilities Service conducts this training program, both within each region and in conjunction with the FAA national training facility. The courses fall into five groups: Navigational Aids, Radar, Data System, Communications, and Environmental Support.

The training progression, which leads to full performance or certification capability on designated types or pieces of equipment, generally includes correspondence study, courses taken in residence at the FAA Academy, and on-the-job training, followed by written and performance certification examinations. All technical training programs are conducted according to nationally prescribed standards. Frequently, centrally administered examinations (Prerequisite: Validation Examinations) are available by which an employee may demonstrate knowledge or competence sufficient to waive a required course. Correspondence study courses are designed and administered by the FAA Academy and include supervised, closed-book final examinations. Although taken at home and on the job, the courses include guidance from the Academy and from supervisory personnel at the work site. On-the-job training programs are designed by the FAA Academy and are administered by local supervisory personnel. On-the-job training objectives include expansion of previously completed training and/or preparation for subsequent courses.

Source of official student records: Registrar Unit, AAC-911A, Federal Aviation Administration Academy, Aeronautical Center, P.O. Box 25082, 6500 South MacArthur, Oklahoma City, Oklahoma 73125.

## Advanced ILS/VOR Principles (40204)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** January 1967—June 1981.

**Objective:** To provide the technician with knowledge and skills in ILS/VOR principles necessary for successful completion of specific equipment courses.

**Instruction:** Vacuum tube power amplifiers; multivibrators; wave-shaping networks; amplitude modulation and demodulation; basic transmission lines; radiation patterns; introduction to VOR principles. The course is equally divided between classroom lectures and laboratory and problem-solving sessions. (Prerequisites: VHR Omnirange, OJT-I 43701 and VHF Omnirange [VOR] 44206.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Communications Electronics (3 lecture, 1 laboratory) (4/75).

**FAA equivalent:** FV-100 Advanced ILS/VOR Principles.

## 1. Air Conditioning (40114)
## 2. Air Conditioning (44106)

**Location:** 1. FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.
2. Correspondence.

**Length:** 1. 120 hours (3 weeks).
2. Directed study (Approximately 30 hours).

**Dates:** May 1969—June 1981.

**Objective:** To train personnel responsible for the installation, maintenance, and repair of air conditioning units of a maximum capacity of 10 tons.

**Instruction:** Basic terminology and principles of air conditioning. Safety precautions; function of components and controls of air conditioning systems used by the FAA; interpretation and utilization of enthalpy diagrams and psychrometric charts; interpretation of electrical diagrams of major FAA air conditioning systems; selection of refrigerant piping and accessories; operation and use of associated test equipment and tools; maintenance and servicing procedures. (Prerequisite: Electrical Principles 40100.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Air Conditioning and Heating (1 lecture, 2 laboratory) (7/75). NOTE: Courses 1 and 2 must both be completed to receive credit.

**FAA equivalent: Course 1:** FC-250 or 40104 Air Conditioning or FC-272 Advanced Air Conditioning. **Course 2:** 44114 Air Conditioning (directed study).

## Airport Surveillance Radar, ASR-8 (40333)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 240 hours (6 weeks).

**Dates:** December 1977—June 1981.

**Objective:** To train personnel responsible for the installation, evaluation, modification, maintenance and/or certification of the Airport Surveillance Radar (ASR-8).

**Instruction:** System concepts; system timing; klystron transmitter; normal receiver; digital MTI (Moving Target Indicator) system; STC (Sensitivity Time Control); diversity antenna system; control circuits. (Prerequisites: Radar Principles A 40329 and Radar Principles B 40330.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Radar Technology (2 lecture, 2 laboratory) (6/78).

## AN/GRN-27 (Category II ILS) (40232)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** August 1973—September 1977.

**Objective:** To train technicians responsible for the installation, evaluation, modification, and maintenance of the AN/GRN-27 (Category II ILS).

**Instruction:** Transmitter unit; battery charger; AC/DC converter; identification unit; far field monitor; control unit; remote status and control unit; marker beacon; overall system operation and performance. Half of the course is devoted to laboratory exercises which include the making of checks and adjustments and the diagnosis of malfunctions in the system. (Prerequisites: ILS Concepts 40233, Solid State Devices 44509 or 44712, and Digital Logic Principles 40402.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering Technology (1 lecture, 2 laboratory) (4/75).

**FAA equivalent:** 48042 Category II ILS.

## AN/TPX—42 (40366)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 240 hours (6 weeks).

**Dates:** December 1973—June 1981.

**Objective:** To train personnel responsible for the installation, evaluation, modification, maintenance, and/or certification of the AN/TPX—42—a radar beacon reply digitizer and decoder.

**Instruction:** System concepts; signal processor; reply detection unit; target report unit; data processor; beacon reply processor testing. Laboratory sessions develop skills in system alignment, system performance analysis, fault diagnosis, and use of test equipment. (Prerequisite: Radar Principles A 40329.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Electronics Technology (3 lecture, 1 laboratory) (6/78).

## Approach Light Systems (40124)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** October 1976—June 1981.

**Objective:** To provide training in the operation and maintenance of specific equipment used in airport visual approach navigational aid lighting systems.

**Instruction:** Operating principles, comprehensive circuit analysis, and techniques of fault diagnosis for single-phase and three-phase substations ranging in size from 95 KVA to 175 KVA; sequence flashing lights and high intensity constant burning lights; high voltage series loop lighting systems. Laboratory sessions include fault diagnosis, performance analysis, test procedures, use of the test equipment, and routine checks and adjustments. (Prerequisites: Electrical Principles 40100 and Visual Landing Aids System 40123.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electrical Technology (1 lecture, 2 laboratory) (6/78).

## ARTCC Boilers (43439)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** March 1972—September 1977.

**Objective:** To train stationary engineers and technicians responsible for the operation and maintenance of boiler systems.

**Instruction:** Boiler theory; boiler construction; evaluation and maintenance of boiler systems; fault diagnosis and repair procedures; water testing and treatment; boiler tube replacement methods; preventive maintenance and boiler safety. (Prerequisite: ARTCC Environmental Conditioning and Controls 43438.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Air Conditioning and Heating (1 lecture, 2 laboratory) (7/75).

## ARTCC Environmental Conditioning and Controls (43438)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** March 1972—September 1977.

**Objective:** To train personnel in the maintenance, calibration, and operation of Johnson pneumatic controls and devices for air conditioning.

**Instruction:** Psychrometrics of air; fundamentals of pneumatic control; installation and operation of pneumatic controllers and controlled devices; interface of electrical control of air handling equipment; operation of test equipment for fault diagnosis and calibration; performance evaluation and maintenance of pneumatic control systems. (Prerequisite: Air Conditioning 40114.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Air Conditioning and Heating (1 lecture, 2 laboratory) (7/75).

## ARTCC Heavy-Duty Air Conditioning (43440)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** September 1972—September 1977.

**Objective:** To train personnel responsible for the operation, maintenance, and evaluation of air conditioning chiller systems.

**Instruction:** Centrifugal chillers; motors and controls; water distribution equipment; water conditioning; air handling and auxiliary equipment; performance evaluation and maintenance procedures. (Prerequisite: ARTCC Environmental Conditioning and Controls 43438.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Air Conditioning and Heating (1 lecture, 1 laboratory) (7/75).

## ARTCC Standby Power and Distribution System (43449)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 240 hours (6 weeks).

**Dates:** September 1972—September 1977.

**Objective:** To train personnel responsible for the installation, maintenance, and performance testing of the standby power and distribution system.

**Instruction:** Automatic power breakers and control panel circuits; automatic synchronizing panel circuits and related switchgear components; operation, testing, and fault diagnosis and correction. (Prerequisites: Environmental Support Systems Concepts 40117 and 550 Engine Generators 40116.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Engineering Technology (Standby Power Systems) (2 lecture, 2 laboratory) (7/75).

lyzing and evaluating the system. (Prerequisite: ARTS III for Technicians 42004.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Computer Technology (3 lecture, 2 laboratory) (6/75). NOTE: Courses 1 and 2 must both be completed to receive credit.

## ASR-4/5/6 System (40304)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** December 1966—June 1981.

**Objective:** To train technicians responsible for the maintenance of Airport Surveillance Radar Systems.

**Instruction:** Complete terminal radar block diagrams and timing sequences; detailed study of individual units and circuits. Laboratory sessions include fault diagnosis, use of test equipment, and routine checks and adjustments. (Prerequisites: ASR-4/5/6 OJT-I 43750, Radar Principles A 40329, and Radar Principles B 40330.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Pulse Electronics (1 lecture, 2 laboratory) (6/75).

**FAA equivalent:** FR-518 Airport Surveillance Radar System.

## ATCBI-3 Transmitter/Receiver/Indicator Sites (40318)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** February 1969—June 1981.

**Objective:** To train technicians responsible for the maintenance of the ATCBI-3 Transmitter/Receiver and Indicator Site equipment.

**Instruction:** System concepts: pulse mode generator; transmitter; side lobe suppression; receiver; storage tube defruiter; monitors; control circuits; decoder; beacon test set. Laboratory sessions include system alignment, system performance analysis, fault diagnosis, and use of test equipment. (Prerequisites: ATCBI-3, OJT-I 43756, ATCBI-3 Transmitter/Receiver/Indicator Sites [directed study] 44316, Radar Principles A 40329, and Radar Principles B 40330.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Engineering Technology (Communications Electronics) (1 lecture, 2 laboratory) (6/75).

**FAA equivalent:** FR-527C or 40312 ATCBI-3 or the combination of 40314 ATCBI-3 T/R Site and 40316 ATCBI-3 Indicator Site.

## ATCBI-5 (40339)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** June 1977—June 1981.

**Objective:** To train personnel responsible for the installation, evaluation, modification, maintenance, and/or certification of the Air Traffic Control Beacon Interrogator (ATCBI-5) and digital defruiter.

**Instruction:** System concepts; pulse mode generator; stagger/destagger, sidelobe suppression and improved sidelobe suppression (SLS/ISLS); transmitter; receiver; monitors; control circuits; digital defruiter; beacon test set. Laboratory exercises develop skills in system alignment, system performance analysis, fault diagnosis, and use of test equipment. (Prerequisites: Radar Principles A 40329 and Radar Principles B 40330.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Radar Technology (1 lecture, 1 laboratory) (6/78).

## Automatic Program Unit Low Speed (40004)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** January 1965—June 1981.

**Objective:** To train technicians responsible for the installation and maintenance of the Automatic Program Unit Low Speed equipment.

**Instruction:** Theory and operation of the APULS equipment which sequentially selects a number of remote teletype terminals on a common line. (Prerequisites: Solid State Devices 44509 and Digital Logic Principles 40402.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Data Transmission (1 lecture, 1 laboratory) (6/75).

**FAA equivalent:** FC-180 Automatic Program Unit Low Speed (APULS).

## Back-Up Emergency Communications System ARTCC (40009)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** November 1970—June 1981.

**Objective:** To train technicians responsible for the installation, maintenance, and evaluation of the Back-Up Emergency Communications Systems at air route traffic control centers.

**Instruction:** Functional description of the system; detailed technical analysis of the VHF/UHF transceivers and remote control group, including the digital processor. Laboratory sessions include fault diagnosis,

### ARTS–II for Supervisors (42015)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** March 1978—June 1981.

**Objective:** To provide the supervisor with technical background necessary for the supervision of technicians responsible for the Automated Radar Terminal System (ARTS)-II.

**Instruction:** Complete system overview; system introduction; display keyboard operations; decoding data acquisition section; radar alphanumeric display subsystem; magnetic tape unit; TTY interfacing; ARTS–II programming; diagnostic programs; system evaluation; operation program organization. (Prerequisite: Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Computer Technology (2 lecture, 2 laboratory) (6/78).

### ARTS III for Supervisors (42003)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 240 hours (6 weeks).

**Dates:** February 1975—June 1981.

**Objective:** To provide the supervisor with technical background necessary for the supervision of ARTS III System technicians.

**Instruction:** Complete system overview. System introduction; display keyboard operation; data processing subsystem; data acquisition subsystem; peripheral adapted module; data entry and display subsystem; computer fundamentals; ARTS III programming; diagnostic utility and operational programs; the interfacility data set. (Prerequisites: Digital Logic Principles 40402 and Solid State Devices 44509.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Computer Technology (4 lecture, 2 laboratory) (6/75).

### ARTS-II for Technicians (42006)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 600 hours (15 weeks).

**Dates:** August 1977—June 1981.

**Objective:** To train technicians responsible for the installation, maintenance, and repair of an Automated Radar Terminal System (ARTS II).

**Instruction:** Overall system introduction; digital electronics and logic of data acquisition subsystem and peripheral adapter module (data entry and display subsystems, input-output processor, interfacility data set, ARTS II programming, operational program organization, diagnostic programs, and system evaluation). Course consists of formal classroom lectures, supervised problem sessions, and laboratory exercises conducted on an operating ARTS II system. (Prerequisite: Principles of Digital Logic and Data Processing 44411).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 15 semester hours in Computer Technology (6 lecture, 9 laboratory) (6/78).

### ARTS III for Technicians (42004)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 840 hours (21 weeks).

**Dates:** March 1973—September 1977.

**Objective:** To train technicians responsible for the installation, maintenance, and repair of an Automated Radar Terminal System.

**Instruction:** Overall system introduction; digital electronics and logic of data acquisition subsystem and peripheral adapter module (data entry and display subsystem, input-output processor, interfacility data set, ARTS III programming, operational program organization, diagnostic programs, and system evaluation). Course consists of formal classroom lectures, supervised problem sessions, and laboratory exercises conducted on an operating ARTS III system. (Prerequisites: Radar Principles A 40329, Digital Logic Principles 40402, and Solid State Devices 44509.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 21 semester hours in Computer Technology (9 lecture, 12 laboratory) (6/75).

**FAA equivalent:** The combination of 42002 ARTS III for Technicians and 42005 ARTS III Technician Update **or** the combination of 49000 ARTS III for Technicians (conducted at the factory) and 42005 ARTS III Technician Update.

### 1. ARTS III Technician Update (42005)
### 2. ARTS III Technician Update (44413)

**Location:** 1. FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.
2. (Correspondence).

**Length:** 1. 120 hours (3 weeks).
2. Directed Study (approximately 160 hours).

**Dates:** 1. May 1974—September 1977.
2. September 1973—June 1981.

**Objective:** To train the technician in basic programming concepts and techniques needed for the use and operational software analysis of the ARTS III System.

**Instruction:** Software programming; operational features and alignment of the Inter-Facility Data System; use of diagnostic and utility programs for ana-performance analysis, test procedures, use of test equipment, and routine checks and adjustment. (Prerequisites: Solid State Device 44509 and Digital Logic Principles 40402.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Communications Electronics (1 lecture, 2 laboratory) (6/75).

## Bright Radar Indicator Tower Equipment, BRITE-1 (40311)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** March 1969—June 1981.

**Objective:** To train technicians responsible for the maintenance of the Bright Radar Indicator Tower equipment.

**Instruction:** Study and analysis of system functions by major blocks. Differential amplifiers; indicator deflection and rotation circuits; video combining and compensation; storage vidicon theory and circuits; camera and display deflection circuits; 945 line raster and grating bar logic; high voltage supplies. Laboratory sessions develop skills in fault diagnosis, system performance analysis, alignment, test procedures, use of test equipment, and routine checks and adjustments. (Prerequisites: Radar Principles A 40329 and Solid State Devices 44509.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electronic Technology (Video Electronics) (1 lecture, 2 laboratory) (7/75).

**FAA equivalent:** FR-529 BRITE 1 or 40327 BRITE 2.

## Brite Radar Indicator Tower Equipment (BRITE-2/4) (40327)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** October 1977—June 1981.

**Objective:** To provide training for technicians responsible for the alignment and maintenance of Bright Radar Indicator Tower Equipment (BRITE) video display systems—solid-state systems consisting of a high resolution Plan Position Indicator (PPI) for radar data viewed by a Charge-Coupled Television camera and TV displays operating at a 945 line rate.

**Instruction:** Electronic generation of sweep rotation; linearity correction; dynamic focus; video mixing on the PPI; storage vidicon theory and alignment; digital EIA synchronization generator; grating bar generation for linearity standard; resonant flyback sweep circuitry. Laboratory experiences cover application of grey scale, resolution pattern test equipment for realistic optimum alignment, recognition of system problems and fault analysis. (Prerequisite: Radar Principles A 40329.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electronics Technology (Video Technology) (1 lecture, 1 laboratory) (6/78).

## BRITE Numerics (TPX-42) (40367)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** July 1975—June 1981.

**Objective:** To train personnel responsible for the installation, evaluation, modification, maintenance, and/or certification of the TPX-42/BRITE (Bright Radar Indicator Tower Equipment) interface equipment. The Numerics Generation/Conversion Equipment accepts digital input data from the AN/TPX-42 decoding equipment and generates aircraft identity and altitude numerics data which are displayed in video form.

**Instruction:** Principles of operation; logic diagram analysis; problem solving on all elements of the TPX-42/BRITE interface equipment. Sessions develop skills in system alignment, system performance analysis, fault diagnosis, and use of test equipment. (Prerequisite: Radar Principles A 40329.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electronics Technology (laboratory) (6/78).

## Cable Fault Analysis (40121)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** March 1977—June 1981.

**Objective:** To provide instruction and laboratory exercises in the latest techniques of splicing power and communication cables and in the use of various types of signal and resistance measuring equipment in locating underground cable faults.

**Instruction:** Discussion of various types of cables, insulation, and shielding; methods and material used in splicing high and low voltage power and communication cables and coaxial cables; cable fault locations using test equipment to determine the location and type of fault. (Prerequisite: Electrical Principles 40100.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electrical Technology (1 lecture, 1 laboratory) (6/78).

## CDC Display for Technicians (43426)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 400 hours (10 weeks).

**Dates:** December 1969—June 1981.

**Objective:** To train technicians responsible for the installation, maintenance, and repair of the Computer Display Channel Display Subsystem.

**Instruction:** Digital electronics and logic of: radar controls; radar keyboard multiplexer; display generator; plan view display. Laboratory sessions include routine equipment checks, alignment, test procedures, use of test equipment, and fault diagnosis. (Prerequisites: Introduction to CDC Display 44410, Solid State Devices 44509, and Digital Display 40402.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 10 semester hours in Computer Technology (4 lecture, 6 laboratory) (6/75).

## Central Control and Monitoring System (CCMS) Maintenance (43472)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 320 hours (8 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To train technicians responsible for the operation, maintenance, and evaluation of central computerized control and monitoring environmental systems.

**Instruction:** Digital logic and integrated circuitry; codes; computer programming; debugging; data storage and read-out; computer input/output devices (printer, teletype, and CRT); interfacing; computer organization. Laboratory experiences develop skills in equipment performance evaluation, fault diagnosis, test procedures, and routine checks and adjustments. (Prerequisites: Electrical Principles-Phase II 40126 and Central Control and Monitoring System (CCMS) Remote Operators 43474.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Computer Technology (4 lecture, 2 laboratory) (6/78).

## Coded Time Source (43001)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 48 hours (6 days).

**Dates:** April 1969—March 1979.

**Objective:** To train technicians responsible for the installation and maintenance of the Coded Time Source.

**Instruction:** Coded Time Source design logic; WWV receiver; error detection and switchover unit; fail-safe power supplies; audio-taped time display unit. Laboratory exercises include maintenance procedures for the system. (Prerequisites: Solid State Devices 44509 and Digital Logic Principles 40402.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Electronics Technology Laboratory (6/75).

**FAA equivalent:** FP-180 Coded Time Source.

## Common Digitizer AN/FYQ-49 (43402)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 640 hours (16 weeks).

**Dates:** December 1969—June 1981.

**Objective:** To provide the technician with basic background needed to understand the principles of operation of an A/D conversion and processing system for radar beacon systems.

**Instruction:** A functional analysis of an integrated circuit data processor that accepts analog and digital information to: detect aircraft targets; determine target characteristics; process target information; and produce serial target digital output messages. Laboratory sessions include the making of checks and adjustments and the diagnosis of malfunctions in the system. (Prerequisites: Common Digitizer (directed study) 44405, Radar Principles A 40329, Digital Logic Principles 40402, and Solid State Devices 44509.)

**Credit recommendation:** In the upper division baccalaureate category, 12 semester hours in Engineering Technology (Pulse and Digital Electronics) (9 lecture, 3 laboratory) (6/75).

**FAA equivalent:** FR-410 Common Digitizer **or** 48064 Common Digitizer (conducted at the factory).

## Common Digitizer Height AN-FYQ-47 (43404)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 760 hours (19 weeks).

**Dates:** December 1969—June 1981.

**Objective:** To provide the technician with basic background needed to understand the principles of operation of an A/D conversion and processing system for radar beacon systems.

**Instruction:** A functional analysis of an integrated circuit data processor that accepts analog and digital information to: detect aircraft targets; determine target characteristics; process target information, including altitude mode reporting; and produce serial target digital output messages. Laboratory sessions include the making of checks and adjustments and the diagnosis of malfunctions in the system. (Prerequisites: Common Digitizer |directed study| 44405, Radar Principles A 40329, Digital Logic Principles 40402, and Solid State Devices 44509.)

**Credit recommendation:** In the upper division baccalaureate category, 13 semester hours in Engineering Technology (Pulse and Digital Electronics) (9 lecture, 4 laboratory) (6/75).

**FAA equivalent:** FR-410H Common Digitizer Height.

### Communications Equipment (40007)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 320 hours (8 weeks).

**Dates:** November 1969—June 1981.

**Objective:** To provide the technician with a background in communications electronics and its application to UHF and VHF communications equipment maintenance.

**Instruction:** Theory and operation of UHF and VHF transmitters and receivers; audio, remote control, and tone channeling equipment. Laboratory sessions include fault diagnosis, performance analysis, test procedures, use of test equipment, and routine checks and adjustments. (Prerequisites: Electronic Fundamentals and Engineering Mathematics 44504 and Solid State Devices 44509.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Communications Electronics (6 lecture, 2 laboratory) (6/75).

**FAA equivalent:** FC-100 or 40001 Communications Equipment.

### Computer Display Channel for Engineers (43418)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 320 hours (8 weeks).

**Dates:** July 1970—June 1981.

**Objective:** To train engineers and software specialists responsible for the installation, maintenance, and evaluation of Computer Display Channel equipment.

**Instruction:** Basic Assembler Language programming, data strings, system theory and capability; data flow, control paths, and error analysis. Laboratory sessions include identification of all subassemblies and controls, operation of the Computer Display Channel System for the unit maintenance panels, operation of test equipment required to locate faults or system degradation, and use of test and diagnostic programs. (Prerequisite: System Familiarization and BAL Programming 43458.)

**Credit recommendation:** In the upper division baccalaureate category, 7 semester hours in Computer Technology and/or Data Processing (3 lecture, 4 laboratory) (7/75).

**FAA equivalent:** FP-360 CDC for Engineers **or** 43423 CDC for Technicians.

### Computer Display Channel Software (43451)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 320 hours (8 weeks).

**Dates:** October 1972—June 1981.

**Objective:** To train system performance specialists responsible for the maintenance of Computer Display Channel software.

**Instruction:** Functional analysis and operation of peripheral equipment and I/O channel processor diagnostic programs. (Prerequisites: NAS En Route Operational Program 43420 and CDC For Engineers 43418.)

**Credit recommendation:** In the upper division baccalaureate category, 6 semester hours in Computer Technology (2 lecture, 4 laboratory) (7/75).

### Computer Update Equipment (43416)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 240 hours (6 weeks).

**Dates:** August 1971—June 1981.

**Objective:** To train technicians responsible for the installation, maintenance, and repair of the Raytheon computer update equipment.

**Instruction:** Computer readout display; common logic unit; keyboard and quick-action panel; nonradar keyboard multiplexer interface, logic, and memory; power distribution and AC power. (Prerequisite: Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Computer Technology (2 lecture, 3 laboratory) (6/75).

**FAA equivalent:** FP-175 Computer Update Equipment.

### Data Receiving Group (DRG) Inter-Facility Data Set (IFDS) (43417)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 144 hours (3½ weeks).

**Dates:** July 1969—June 1981.

**Objective:** To train technicians responsible for the Data Receiving Set and Inter-Facility Data Set digital equipment.

**Instruction:** A functional analysis of the data receiving group and the inter-facility data set; detailed analysis of all equipment functions. Laboratory sessions include the operation, adjustment, measurements, and fault diagnosis of the equipment. (Prerequisite: Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Computer Technology (1 lecture, 2 laboratory) (7/75).

### DCC Software (43452)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length: Version 1:** 200 hours (5 weeks).
**Version 2:** 160 hours (4 weeks).

**Dates:** February 1973—September 1977.

**Objective:** To train systems performance specialists responsible for the maintenance of Display Channel Complex software.

**Instruction:** Functional analysis and operation of Display Channel Complex diagnostic programs. Emphasis is on problem analysis and operational aspects of the software package as related to the National Airspace System En Route system operation. (Prerequisites: NAS En Route Operational Program 43420, Display Channel Complex for Engineers 43431, and IBM 9020 System Familiarization and BAL Programming 43458.)

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Computer Technology (1 lecture, 3 laboratory) (7/75).

## 1. Diesel Engine Generators (44102)
## 2. 550-KW Diesel Engine Generators (40116)

**Location:** 1. (Correspondence).
2. FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 1. Directed study (approximately 45 hours).
2. 80 hours (2 weeks).

**Dates:** 1. October 1965—June 1981.
2. September 1972—September 1977.

**Objective:** To train personnel responsible for the operation, maintenance, and performance testing of 550-KW diesel engine generators.

**Instruction:** Overview of diesel engine generators. Operation; fuel systems; air starting system; hydraulic governor; turbocharger; auxiliary equipment; load balancing of cylinders; crankshaft deflection; engine generator coupling alignment; control panels; safety devices. Maintenance and evaluation of overall performance of the engine and auxiliary equipment. (Prerequisites of Course 2: Diesel Engine Generators 44102 and Gasoline and Diesel Engine Generators 40118.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Engineering Technology (Standby Power Systems) (1 lecture, 1 laboratory) (7/75).

**FAA equivalent: Course 1:** DFE-3 Diesel; Engine Generator (directed study). **Course 2:** FC-243 or 40102 or 40129 550-KW Engine Generator.

## Digital Logic Principles (40402)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** January 1971—September 1977.

**Objective:** To provide the technician with a basic background in digital logic which can be applied to specific equipment courses.

**Instruction:** Number systems and operations; coding; Boolean algebra; Karnaugh maps; logic networks; sequential networks; introduction to computers.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Digital Logic Principles (4/75).

**FAA equivalent:** FP-100 or 40400 Principles of Data Processing **or** 40404 Fundamentals of Computers Symbolic Logic.

## Display Channel Complex for Engineers (43431)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 200 hours (5 weeks).

**Dates:** September 1972—June 1981.

**Objective:** To train systems engineers responsible for the installation and maintenance of the Display Channel Complex of the National Airspace System.

**Instruction:** Functional and operational aspects of the Display Channel Complex from a computer system standpoint. Emphasis is placed on systems analysis through laboratory exercises. (Prerequisites: CCC for Engineers 43463 and IBM 9020 System Familiarization and BAL Programming 43458.)

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Computer Technology (1 lecture, 3 laboratory) (7/75).

## Doppler VOR System (40207)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** November 1969—September 1977.

**Objective:** To train technicians responsible for the installation, maintenance, and evaluation of Doppler VOR equipment.

**Instruction:** The Doppler principle; FM capture effect; specialized radiation patterns; theoretical and practical differences between the Doppler VOR and conventional VOR systems. (Prerequisite: VHF Omnirange Equipment (VOR) 40205.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Communications Electronics (4/75).

**FAA equivalent:** FV-210 Doppler VOR System.

## Electrical Principles (40100)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 200 hours (5 weeks).

**Dates:** January 1965—June 1981.

**Objective:** To provide background in basic electricity needed by technicians responsible for the maintenance of electromechanical equipment.

**Instruction:** Review of basic mathematics; fundamental principles of electricity; batteries, Ohm's law, series and parallel circuits; electrical conductors; alternating current, inductance, capacitance, and reactance; use of common electrical measuring instruments; introduction to generators, motors, and transformers; single- and three-phase power distribution; power and control cable repair; practical methods of locating cable troubles. (Prerequisite: Foundation Mathematics 44510 or 44502—first six lessons.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Basic Electricity (3 lecture, 2 laboratory) (6/75).

**FAA equivalent:** FC-220 Electrical Principles **or** DFE-1 or DFE-22 Basic Electricity (directed study) **or** DFE-21 Facility Electrical Systems (directed study) **or** the combination of 44108, 44109, and 44110 Basic Electricity (directed study).

## Electrical Principles—Phase II (40126)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** October 1976—June 1981.

**Objective:** To provide the technician with the basic electronics needed for the subsequent study of advanced electronic systems.

**Instruction:** Review of basic AC and DC circuit theory; diodes, transistors, SCRs, UJTs, FETs, Logic Gates, Multivibrators, and Flip-Flops (R/S, and J-K); passive filters, amplifiers (basic, multistage, and power), operational amplifiers, integrators, and comparators; regulated power supplies. (Prerequisite: Electrical Principles 40100.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Electrical or Electronics Technology or Industrial Electronics (3 lecture, 2 laboratory) (6/78).

## Electronic Fundamentals and Engineering Mathematics (44504)

**Location:** (Correspondence).

**Length:** Directed study (approximately 280 hours).

**Dates:** January 1964—June 1981.

**Objective:** To provide the technician with basic background in electronics which can be applied to the installation, maintenance, and evaluation of electronic equipment.

**Instruction:** Basic mathematics; algebra; logarithms; determinants; complex algebra; trigonometry and graphing of functions in rectangular, polar, and spherical coordinates; Ohm's law; Kirchhoff's laws; DC and AC circuits; superposition, Thevenin's and Norton's theorems; series, parallel, and resonant circuits; basic vacuum tubes, semiconductors, and classification of amplifiers. (Prerequisite: Foundation Mathematics 44502.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in DC/AC Circuit Theory and 3 semester hours in Mathematics (4/75).

**FAA equivalent:** DFF-100 Electronic Fundamentals and Engineering Math (directed study).

## En Route Radar System ARSR-½ (40307)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** March 1975—June 1981.

**Objective:** To train technicians responsible for the installation, maintenance, and evaluation of the ARSR-½ En Route Radar System.

**Instruction:** Complete terminal radar block diagrams and timing sequences; detailed study of individual units and circuits. Laboratory sessions include fault diagnosis, system performance analysis, alignment, test procedures, use of test equipment, and routine checks and adjustments. (Prerequisites: Radar Principles A 40329, Radar Principles B 40330, Digital Logic Principles 40402, and Solid State Devices 44509.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Pulse Electronics (1 lecture, 2 laboratory) (6/75).

**FAA equivalent:** FR-528 ARSR-½.

## Engine and Control Panels (40127)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 200 hours (5 weeks).

**Dates:** October 1976—June 1981.

**Objective:** To provide training in the operation and maintenance of diesel-and gasoline-powered single-phase and three-phase engine generators.

**Instruction:** Magneto and battery ignition systems; carburetion, relays, switches, solenoids, and other circuit components; hydraulic and electrical speed control governors; automatic control circuits—principles of operation and troubleshooting. Laboratory sessions include fault diagnosis, performance analysis, test procedures, use of the test equipment, routine checks and adjustments. (Prerequisite: Electrical Principles 40100.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Electrical or Mechanical Power Technology (2 lecture, 3 laboratory) (6/78).

### Engine Generator Control Devices (40128)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** November 1976—June 1981.

**Objective:** To provide training in the operation and maintenance of solid-state voltage regulators and governors, and solid-state monitoring of voltage and phase differential.

**Instruction:** Voltage regulators with differential amplifier control; magnetic amplifier control and transistor switching control; electronic governers with magnetic pickup unit with control; electronic governers with current compensation control; solid-state relays used as voltage and phase differential monitoring and timing devices. (Prerequisites: Electrical Principles 40100 and Electrical Principles—Phase II 40126.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electrical or Mechanical Power Technology, Electrical Technology, or Electromechanical Technology (2 lecture, 1 laboratory) (6/78).

### 1. Environmental Support System Concepts (40117)
### 2. Solid State Fundamentals for Electromechanics (40115)
### 3. Solid State Fundamentals for Electromechanics (44107)

**Location:** 1 and 2. FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.
3. (Correspondence).

**Length:** 1. 80 hours (2 weeks).
2. 80 hours (2 weeks).
3. Directed study (approximately 160 hours).

**Dates:** 1. March 1972—September 1977.
2. April 1970—September 1977.
3. March 1972—June 1981.

**Objective:** To provide an introduction to electronics to technicians responsible for the maintenance of electromechanical equipment.

**Instruction:** Semi-conductor devices: diodes; bipolar and field effect transistors; SCRs; unijunction transistors. Basic application of rectifiers, basic amplifiers, gates, and multivibrators. (Prerequisite of Course 3: Electrical Principles 40100.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Introduction to Electronics (2 lecture, 2 laboratory) (7/75). NOTE: Courses 1 and 2 or Courses 1 and 3 must both be completed in order to receive credit.

**FAA equivalent: Course 3:** 44509 Solid State Devices (directed study).

### Environmental Systems and Controls (40133)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** November 1976—June 1981.

**Objective:** To provide technicians with the knowledge required to evaluate, calibrate, and maintain pneumatic control systems and components as applicable to heating, ventilating, and air conditioning.

**Instruction:** Various types of pneumatic controls, including Johnson, Honeywell, Robertshaw, Barbara-Coleman, and Powers; properties and conditions of air; system analysis and balancing; pneumatic control of air handling equipment; environmental control systems; use of special test equipment; troubleshooting and calibration methods and performance evaluation. (Prerequisites: Air Conditioning 40114 and Heating, Ventilating and Air Conditioning 40132, or an appropriate screening examination.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Heating, Ventilation, and Air Conditioning Technology (2 lecture, 2 laboratory) (6/78).

### 550 KW Diesel Engine Generators (40129)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** September 1976—June 1981.

**Objective:** To train technicians for the operation, maintenance, and evaluation of a diesel engine power generator.

**Instruction:** Basic diesel engine theory; start/alarm panel auxiliary control, air start system; fuel system, intake air and exhaust system; intercooler, lubrication system; cooling system, governor system, generator. (Prerequisite: Electrical Principles 40100.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Mechanical Power Technology (1 lecture, 2 laboratory) (6/78).

### 1. Flight Data Entry and Printout (44407)
### 2. Flight Data Entry and Printout Equipment (43409)

**Location:** 1. (Correspondence).
2. FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 1. Directed study (approximately 26 hours).
2. 160 hours (4 weeks).

**Dates:** June 1970—June 1981.

**Objective:** To train technicians responsible for the installation, evaluation, and maintenance of Flight Data Entry and Printout equipment.

**Instruction:** Control unit keyboard and printer; power supply line timer; logic; TTY adapter. Most of the course is devoted to laboratory exercises which include on-line trouble analysis and the diagnosis of malfunctions in the system. (Prerequisites: Solid State Devices 44509 and Digital Logic Principles 40402.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electromechanical Technology (1 lecture, 2 laboratory) (6/75). NOTE: Courses 1 and 2 must both be complete in order to receive credit.

**FAA equivalent: Course 2:** FP-160 Flight Data Entry and Printout.

## Flight Data Entry and Printout Equipment (43409)

Refer to Flight Data Entry and Printout (44407).

## Foundation Mathematics (44502)

**Location:** (Correspondence).

**Length:** Directed study (approximately 150 hours).

**Dates:** September 1967—June 1981.

**Objective:** To provide the technician with basic skills and knowledge of foundation mathematics essential for successful completion of specific equipment courses.

**Instruction:** Review of arithmetic; elementary algebra (polynomials, linear and quadratic equations, and factoring) with application to electrical circuit problems involving batteries, motors, efficiency, and power; elementary trigonometric functions and logarithms. Text: Cooke and Adams, *Basic Mathematics for Electronics* (Third Edition).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Natural Sciences (4/75).

**FAA equivalent:** DFF-90 Foundations of Mathematics (directed study).

## Gasoline and Diesel Engine Generators (40118)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 200 hours (5 weeks).

**Dates:** July 1974—September 1977.

**Objective:** To train personnel responsible for the installation, maintenance, and performance testing of standby engine generators.

**Instruction:** System principles; control panels for gasoline and diesel engine generator systems; exciters and alternators; magnetic and solid state voltage regulators; batteries and starters; hydraulic and electronic governors; ignition systems; carburetors; high- and low-pressure fuel pumps; fuel injectors; lubricating and cooling systems. Laboratory exercises include maintenance, fault diagnosis, and repair of 40-240 KW auxiliary power systems. (Prerequisite: Solid State Fundamentals for Electromechanics 44107.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Engineering Technology (Standby Power Systems) (2 lecture, 2 laboratory) (7/75).

## Heating, Ventilating, and Air Conditioning (40132)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** October 1976—June 1981.

**Objective:** To train personnel responsible for the installation, maintenance, and evaluation of boilers and heavy duty air-conditioning systems.

**Instruction:** Theory and construction of boilers and air conditioning; troubleshooting; water testing and treatment; boiler tube replacement methods; boiler operational safety; centrifugal chillers, motors, and controls; water distribution equipment; air handling; auxiliary equipment. (Prerequisite: Air Conditioning 40114 or an appropriate screening examination.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Heating, Ventilation, or Air Conditioning Technology (3 lecture, 1 laboratory) (6/78).

## High Capacity Voice Recorder (HCVR) (40016)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** June 1976—June 1981.

**Objective:** To train personnel responsible for the installation, maintenance, and/or evaluation of the high capacity voice recorder system.

**Instruction:** Principles of magnetic recording; theory of operation of a modern high capacity voice recorder system. Laboratory experience focuses on the maintenance and troubleshooting of a particular high capacity voice recorder system. (Prerequisites: NAV/COM/RADAR Digital Logic Principles 44414 and Solid State Devices 44509.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Audiovisual Technology or Electromechanical Technology (2 lecture, 1 laboratory) (6/78).

## IBM 2314-A1 Direct Access Storage Facility (43437)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** March 1972—June 1981.

**Objective:** To train technicians responsible for the operation and maintenance of the IBM 2314 disk control unit and IBM 2312 disk drive.

**Instruction:** Mechanical and logical analysis of disk drive unit operations; adjustment and error diagnosis of the disk drive unit; logical analysis of storage control unit; resident and on-line microdiagnostic testing; software diagnostic testing; preventive maintenance procedures. (Prerequisite: IBM 9020 A Processing 43461 or IBM 9020 D/E Processing 43462.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electromechanical Technology (1 lecture, 2 laboratory) (7/75).

## IBM 9020 A/D PAM and System Control (43460)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 200 hours (5 weeks).

**Dates:** October 1974—June 1981.

**Objective:** To train technicians responsible for the maintenance of the Peripheral Adapter Module, the Flight Strip Printer Control Module, and the system console.

**Instruction:** Operating principles and maintenance procedures for the Peripheral Adapter Module, the Flight Strip Printer Control Module, and the system console associated with the IBM 9020 system; multiplexer principles and parallel data to serial data conversion. Laboratory exercises include on-line trouble analysis and the diagnosis of malfunctions in the system. (Prerequisite: IBM 9020 Input/Output Equipment 43459.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Computer Technology (2 lecture, 2 laboratory) (7/75).

## IBM 9020 CCC for Engineers (43463)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 280 hours (7 weeks).

**Dates:** November 1974—June 1981.

**Objective:** To train engineers and software specialists responsible for the maintenance of the Central Computer (IBM 9020) Complex.

**Instruction:** Operation of the IBM 9020 system or a subsystem from the System Console or individual element control panels; system configuration, operation, and loading of programs to accomplish all system functions; evaluation of control and data paths within the system; analysis and use of the four system operational states; use of parity generation and checking methods. The course includes lectures and laboratory experiences. (Prerequisite: IBM 9020 System Familiarization and BAL Programming 43458.)

**Credit recommendation:** In the upper division baccalaureate category, 6 semester hours in Computer Technology (2 lecture, 4 laboratory) (7/75).

**FAA equivalent:** FP-255 or 43414 CCC for Engineers or FP-250 or 43413 CCC for Technicians.

## IBM 9020 D/E Processing (43462)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 800 hours (20 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To train technicians responsible for the operation and maintenance of the computer, storage, and I/O control elements of the IBM 9020 Central Processor.

**Instruction:** Computer organization and architecture; registers, buffers, and data flow; timing, sequencing, and addressing; microprogramming; dumps, diagnostics, and parity checks; principles of core storage; multiplexing and input/output control. Laboratory sessions include test procedures and fault diagnosis. (Prerequisite: IBM 9020 Input/Output Equipment 43459.)

**Credit recommendation:** In the upper division baccalaureate category, 15 semester hours in Computer Technology (6 lecture, 9 laboratory) (7/75).

**FAA equivalent:** 43427 IBM 9020 D/E Common.

## IBM 9020 E Option Specialty (43430)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length: Version 1:** 240 hours (6 weeks).
**Version 2:** 200 hours (5 weeks).

**Dates:** November 1971—June 1981.

**Objective:** To train technicians responsible for the operation and maintenance of the data computer processor element of the IBM 9020 Central Processor.

**Instruction:** Operating principles and maintenance procedures for the data computer processor. Display element; configuration console; adapter units; power supply; Display Channel Complex display operational program software. Laboratory exercises include test procedures and fault diagnosis. (Prerequisite: IBM 9020 D/E Processing 43462.)

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Computer Technology (1 lecture, 3 laboratory) (7/75).

## IBM 9020 Input/Output Equipment (43459)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 280 hours (7 weeks).

**Dates:** August 1974—June 1981.

**Objective:** To train technicians responsible for the operation and maintenance of the input/output equipment associated with the Central Computer Complex Processor.

**Instruction:** Operating principles and maintenance procedures. Tape control and transport units; integrated control units; card read/punch equipment; line printers. (Prerequisite: IBM 9020 System Familiarization and BAL Programming 43458.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Electromechanical Technology (2 lecture, 3 laboratory) (7/75).

**FAA equivalent:** FP-250 or 43413 CCC for Technicians.

## IBM 9020 Peripheral Devices (43457)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 200 hours (5 weeks).

**Dates:** September 1974—June 1981.

**Objective:** To train technicians responsible for the operation and maintenance of specific peripheral and unit record equipment.

**Instruction:** Operating principles and maintenance procedures. 1980 flight strip printer; 1052 input/output typewriter; IBM 029 card punch; IBM 129 card punch-print-verifier. (Prerequisite:Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electromechanical Technology (1 lecture, 2 laboratory) (7/75).

## IBM 9020 System Familiarization and BAL Programming (43458)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 320 hours (8 weeks).

**Dates:** July 1974—June 1981.

**Objective:** To train engineers, technicians, and software specialists responsible for the operation of IBM 9020 facilities.

**Instruction:** IBM 9020 system familiarization and operation; computer organization; machine language programming; Basic Assembler Language programming; utility language programming; general familiarization of diagnostic software and peripheral devices. (Prerequisite: Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the upper division baccalaureate category, 7 semester hours in Computer Technology and/or Data Processing (4 lecture, 3 laboratory) (7/75).

**FAA equivalent:** FP-250 or 43413 CCC for Technicians **or** FP-255 or 43414 CCC for Engineers **or** 43427 IBM 9020 D/E Common.

## ILS (AIL Mark Ib) (40236)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** July 1972—June 1981.

**Objective:** To train technicians responsible for the installation, evaluation, modification, and maintenance of the AIL Mark Ib ILS.

**Instruction:** Transmitter unit; modulator; monitor; status control and status unit; oscillator keyer; remote monitor receiver; flight inspection; overall system operation and performance. Half of the course is devoted to laboratory exercises which include the making of checks and adjustments and the diagnosis of malfunctions in the system. (Prerequisites: ILS Concepts 40233 and Solid State Devices 44509 or 44712.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering Technology (1 lecture, 2 laboratory) (4/75).

**FAA equivalent:** FV-325 or 40211 ILS AIL **or** 40617 AIL Mark Ib Interim.

## 1. ILS Capture Effect Glide Slope (40240)
## 2. ILS Problem Analysis (40246)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 1. 40 hours (5-6 days).
2. 80 hours (2 weeks).

**Dates:** 1. September 1973—June 1981.
2. November 1973—September 1977.

**Objective:** To train engineers and senior technicians responsible for the installation, evaluation, and solution of complex problems associated with Instrument Landing Systems.

**Instruction:** Capture effect glide slope equipment; V-Ring optimization; monitoring system; traveling wave antenna; ILS site analysis; interference to localizer/glide slope signals; marker beacon problems; theodolite placement; computer analysis of radiation patterns. Laboratory exercises include checks and adjustments associated with a capture effect glide slope facility, V-Ring optimization, and problem-solving situations in which students analyze flight recordings and determine location of interference to localizer/glide slope signals. (Prerequisite: ILS [Tube Type] 40234 or AN/GRN-27 [Category II ILS] 40232 or ILS [Wilcox Mark Ia] 40235 or ILS [AIL Mark Ib] 40236.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Engineering Technology (2 lecture, 1-2 laboratory) (4/75). NOTE: Courses 1 and 2 must both be completed to receive credit.

## ILS Concepts (40233)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** July 1972—June 1981.

**Objective:** To provide the technician with communications electronics concepts common to several Instrument Landing Systems which can be applied to specific equipment courses.

**Instruction:** Difference in depth of modulation; proximity effects; null reference glide slope radiation patterns and monitor networks; V-Ring localizer radiation patterns; monitor networks. The course is equally divided between classroom lectures and laboratory exercises. (Prerequisite: Advanced ILS/VOR Principles 40204.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Communications Electronics (4/75).

**FAA equivalent:** FV-300 or 40218 or 40206 ILS.

## ILS Problem Analysis (40246)

Refer to ILS Capture Effect Glide Slope (40240).

## ILS (Tube Type) (40234)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** July 1972—September 1977.

**Objective:** To train technicians responsible for the installation, evaluation, modification, and maintenance of tube-type instrument landing systems.

**Instruction:** Localizer subjects: transmitter: sideband generator (mechanical and electronic); modulation bridge; hybrid unit; RF distribution; monitor; control circuits; 8-loop antenna array; overall facility operation and performance. Glide slope subjects: transmitter; mechanical modulator; RF distribution; monitor; control circuits; overall facility operation and performance. Marker beacon subjects: transmitter and antenna array. Half of the course is devoted to laboratory exercises which include the making of checks and adjustments and the diagnosis of malfunctions in the system. (Prerequisite: ILS Concepts 40233.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering Technology (1 lecture, 2 laboratory) (4/75).

**FAA equivalent:** FV-300 or 40218 or 40206 ILS.

## ILS (Wilcox Mark Ia) (40235)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** July 1972—June 1981.

**Objective:** To train technicians responsible for the installation, evaluation, modification, and maintenance of the Wilcox Mark Ia ILS.

**Instruction:** Transmitter unit; modulator; monitor; status control and status unit; oscillator keyer; remote monitor receiver; flight inspection; overall system operation and performance. Half of the course is devoted to laboratory exercises which include the making of checks and adjustments and the diagnosis of malfunctions in the system. (Prerequisites: ILS Concepts 40233 and Solid State Devices 44509 or 44712.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering Technology (1 lecture, 2 laboratory) (4/75).

**FAA equivalent:** FV-320 or 40233 or 40216 Wilcox Mark I ILS.

## Introduction to the IBM 9020 Central Computer Complex (44404)

**Location:** (Correspondence).

**Length:** Directed study (approximately 115 hours).

**Dates:** April 1968—June 1981.

**Objective:** To provide the technician with an introduction to the IBM Central Computer Complex.

**Instruction:** Binary and hexadecimal number systems; computer organization; National Airspace System concepts; machine language and Basic Assembler Language programming concepts; system monitoring and control concepts. (Prerequisite: Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Computer Technology and/or Data Processing (7/75).

## IOPB (42007)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 360 hours (9 weeks).

**Dates:** June 1977—June 1981.

**Objective:** To train technicians, engineers, and system processor specialists responsible for the operation and maintenance of a programmable digital data processor and input/output controller (IOPB) used with the FAA's Automatic Radar Terminal System (ARTS).

**Instruction:** System introduction; processor instruction set; input/output instruction set; principles of programming (symbolic coding and machine language); processor hardware; input/output hardware; memory; utility software. (Prerequisite: Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Computer Technology or Data Processing (3 lecture, 3 laboratory) (6/78).

## JOVIAL Programming (43464)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** October 1974—June 1981.

**Objective:** To train engineers and software specialists in the JOVIAL higher level language.

**Instruction:** Fundamentals of programming in the JOVIAL language used in the real-time operation of the National Airspace System. (Prerequisite: IBM 9020 System Familiarization and BAL Programming 43458.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Computer Programming (7/75).

**FAA equivalent:** 43414 CDC for Engineers.

## Model 29/35 Teletype Equipment (40012)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** June 1971—June 1981.

**Objective:** To train technicians responsible for the installation, maintenance, and evaluation repair of electromechanical communications equipment.

**Instruction:** The course consists of classroom study and laboratory experience in the operating principles, installation, and maintenance of teletype equipment. (Prerequisite: Basic Electricity 44101 or Electrical Principles 40100 or Communications Equipment 40007.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electromechanical Technology (1 lecture, 2 laboratory) (6/75).

**FAA equivalent:** FC-150 or 40002 Teleprinter.

## 1. Multi-Channel Recorders (43600)
## 2. Multi-Channel Recorders (44002)

**Location:** 1. (On-the-job training).
2. (Correspondence).

**Length:** 1. On-the-job training (approximately 53 hours).
2. Directed study (approximately 62 hours).

**Dates:** November 1967—June 1979.

**Objective:** To train personnel responsible for the installation, maintenance, and evaluation of Multi-Channel Recorders.

**Instruction:** Basic principles of magnetic tape recorder and reproducers; specific equipment-type familiarization; minor adjustments; basic test procedures; simple element replacements on several types of recorders/reproducers.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electromechanical Technology (1 lecture, 1 laboratory) (7/75).

**FAA equivalent: Course 2:** FC-160 or 40003 Multi-Channel Recorders.

## NAS En Route Automation I/O Equipment for Engineers (43412)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** March 1971—June 1981.

**Objective:** To train systems engineers in the principles of the National Airspace System Automation Input/Output Equipment.

**Instruction:** Power systems; coded time source; computer update equipment; printing card punch; flight strip printer and I/O typewriter; flight strip printer control module; flight data entry and printout equipment. Laboratory sessions include test procedures and fault diagnosis. (Prerequisite: Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Computer Technology (1 lecture, 1 laboratory) (7/75).

## NAS En Route Operational Program for Engineers (43420)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** October 1972—September 1977.

**Objective:** To train engineers and software specialists in the NAS En Route Air Traffic Control operational program.

**Instruction:** Functions, capabilities, and limitations of the National Airspace System (NAS) En Route Air Traffic Control (ATC) operational program; analysis of system problems associated with the air traffic control functions; resolution of hardware-software conflicts arising with the NAS Environment; monitoring and evaluation of system performance and status of the NAS. This course does not include the radar data processing portion of the ATC operational program. (Prerequisite: JOVIAL Programming 43464.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Computer Technology (1 lecture, 2 laboratory) (7/75).

## Power Conditioning System (40131)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 360 hours (9 weeks).

**Dates:** September 1976—June 1981.

**Objective:** To train technicians to operate and maintain the FAA's version of the uninterruptable power system with the critical power buss for computerized equipment.

**Instruction:** Heavy duty batteries and battery chargers; regulators, phase comparators, synchronizers and inverters; transformers; timing circuits and circuit breakers; sensing circuits, automatic selectors, logic circuits, interlocks, and remote display devices. Lectures and laboratories focus on concepts, circuit analysis, operation, evaluation, maintenance procedures, safety, troubleshooting, and fault correction down to the component level. (Prerequisite: Standby Power and Distribution Panel 40130.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Electrical Technology (3 lecture, 3 laboratory) (6/78).

## Power Conditioning System (43433)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 320 hours (8 weeks).

**Dates:** March 1972—September 1977.

**Objective:** To train personnel responsible for the maintenance, installation, and performance testing of power conditioning systems.

**Instruction:** Power conditioning system concepts; functional description and circuit analysis; system operations, testing, and maintenance procedures; fault diagnosis and correction. (Prerequisite: ARTCC Standby Power and Distribution System 43449.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Electrical Technology (2 lecture, 3 laboratory) (7/75).

## Principles of Digital Logic and Data Processing (44411)

**Location:** (Correspondence).

**Length:** Directed study (approximately 100 hours).

**Dates:** July 1972—July 1979.

**Objective:** To provide the technician with a basic background in digital logic which can be applied to specific equipment courses.

**Instruction:** Number systems and operations; coding; Boolean algebra; simple logic circuits and flip-flops.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Digital Logic Principles (7/75).

**FAA equivalent:** The combination of DFD-41 and DFD-42 Principles of Data Processing (directed study) or the combination of 40402 Digital Logic Principles and 44509 Solid State Devices.

## Radar Bright Display Equipment, RBDE-6 (40324)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** August 1970—June 1981.

**Objective:** To train technicians responsible for the installation and maintenance of the Radar Bright Display Equipment.

**Instruction:** Study and analysis of system functions by major blocks; read and write deflection, dynamic focus, and video-circuitry; dual-gun storage tube principles, adjustment, and operations; horizontal display; interrelated control functions. Laboratory sessions include fault diagnosis, performance analysis, alignment, test procedures, use of test equipment, and routine checks and adjustments. (Prerequisites: Radar Principles A 40329 and Solid State Devices 44509.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Video Electronics (2 lecture, 2 laboratory) (6/75).

## Radar Data Acquisition System (43400)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** November 1968—June 1981.

**Objective:** To train systems engineers in the principles of the Radar Data Acquisition System.

**Instruction:** Functional analysis of the Radar Data Processing Subsystem. Subsystem parameters; overall block diagram analysis of search radar, beacon, common digitizer, modem, and data receiver group equipment; evaluation of subsystem performance. Laboratory sessions develop skills in fault diagnosis, system performance analysis, test procedures, and use of test equipment. (Prerequisite: Basic knowledge of mathematics, electronics, and digital logic.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Electronics Technology (2 lecture, 1 laboratory) (7/75).

## Radar Microwave Link System RML-1/2/3/4 (RML-T/R) (40322)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** September 1969—June 1981.

**Objective:** To train technicians responsible for the maintenance of Radar Microwave Link System.

**Instruction:** Detailed circuit analysis within all modules of the system. Frequency modulation; frequency mixing and multiplexing; carrier channels; single sideband; carrier filtering and reconstruction; modulation-demodulation. Laboratory sessions include system performance analysis, test procedures, calibration, and use of test equipment. (Prerequisites: Radar Principles A40329, Radar Principles B40330, and Radar Microwave Link Systems [directed study] 44313.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Communication Electronics (1 lecture, 2 laboratory) (6/75).

**FAA equivalent:** FR-503 or 40302 RML T/R.

### Radar Principles A (40329)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 280 hours (7 weeks).

**Dates:** December 1970—June 1981.

**Objective:** To develop detailed knowledge of the basic circuits used in communications systems and to provide an introduction to radar principles and circuits.

**Instruction:** Circuit analysis topics: network theorems; vacuum tubes; transistors; operational amplifiers; regulated power supplies; special solid state devices; transistors in RC circuits; clippers; sweep circuits; transients in RL and RLC circuits; the ringing circuits; the RL differentiator; multivibrators; phantastroms; pulse transformers; blocking oscillators. Display techniques: types of radar indicators; concept of electric and magnetic fields; cathode ray tubes; electromagnetic deflection; synchros and servomechanisms; digital azimuth techniques; video amplifiers; television principles. Laboratory sessions demonstrate the operation of the circuits studied. (Prerequisites: Solid State Devices 44509 and Digital Logic Principles 40402.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Communications Electronics (3 lecture, 1 laboratory) and 3 semester hours in Radar Principles (2 lecture, 1 laboratory) (6/75).

**FAA equivalent:** FR-200 Basic Radar or 40300 Radar.

### Radar Principles B (40330)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 240 hours (6 weeks).

**Dates:** December 1970—June 1981.

**Objective:** To continue the study of radar principles and circuits begun in Radar Principles A (40329).

**Instruction:** Pulse modulators; local oscillators; magnetrons; klystrons; amplitrons; transmission lines; wave guides and cavities; switching devices; radar antennas; propagation of microwave energy; radar receivers; MTI circuits (analog and digital). Laboratory sessions are conducted to familiarize students with the operation of the devices. (Prerequisite: Radar Principles A 40329.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Radar Principles (4 lecture, 2 laboratory) (6/75).

**FAA equivalent:** FR-200 Basic Radar or 40300 Basic Radar.

### RDP Operational Programming (43450)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** December 1972—September 1977.

**Objective:** To train engineers and software specialists in the Radar Data Processing portion of the NAS En Route Air Traffic Control operational program.

**Instruction:** Functional analysis of the Radar Data Processing software portion of the National Airspace System En Route Air Traffic Control operational program. Functions, capabilities, and limitations of the radar processing and associated monitor subprograms. (Prerequisite: NAS En Route Operational Program for Engineers 43420.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Computer Technology (1 lecture, 1 laboratory) (7/75).

### Rho-Theta Monitor Equipment RTC-2 (40238)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** July 1972—June 1981.

**Objective:** To train technicians responsible for the installation, certification, maintenance, and evaluation of the RTC-2 test-monitor-control equipment.

**Instruction:** Operating principles; comprehensive circuit analysis; techniques of failure diagnosis. The course is equally divided between classroom lectures and laboratory demonstration and performance exercises. (Prerequisite: Rho-Theta Navigation Equipment, RTB-2 40237.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Engineering Technology (1 lecture, 2 laboratory) (4/75).

### Rho-Theta Monitor Equipment, RTC-3 (40221)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 200 hours (5 weeks).

**Dates:** February 1974—June 1981.

**Objective:** To train technicians responsible for the installation, certification, evaluation, and maintenance of the RTC-3 Rho-Theta (TACAN) Monitor.

**Instruction:** Detailed and comprehensive circuit analysis of the RTC-3 equipment; digital and analog integrated circuits; operating principles; techniques of failure diagnosis. The course is equally divided between classroom lectures and laboratory exercises. (Prerequisites: Digital Logic Principles 40402, Solid State Devices 44509 or 44712, and either Rho-Theta Navigation Equipment, RTB-2 40237 or Rho-Theta Navigation Equipment, GRN-9 40239 or Rho-Theta Navigation Equipment, GRN-9 44207 and 43700 together.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Engineering Technology (2 lecture, 2 laboratory) (4/75).

**FAA equivalent:** FD-260 TACAN RTC-3 **or** 40220 RTC-3.

### 1. Rho-Theta Navigation Equipment, GRN-9 (40239)
### 2. Rho-Theta Navigation Equipment, GRN-9 (44207)
### 3. Rho-Theta Navigation Equipment, GRN-9 (43700)

**Location:** 1. FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.
2. (Correspondence).
3. (On-the-job training).

**Length:** 1. 80 hours (2 weeks).
2. Directed study (approximately 120 hours).
3. On-the-job training (approximately 106 hours).

**Dates:** 1. July 1973—June 1981.
2. January 1975—June 1981.
3. January 1975—June 1981.

**Objective:** To train technicians responsible for the installation, certification, maintenance, and evaluation of the GRN-9 beacon and RTA-2 antenna.

**Instruction:** Operating principles; comprehensive circuit analysis; techniques of failure diagnosis. The course is equally divided between classroom lectures and laboratory demonstration and performance exercises. (Prerequisite: Rho-Theta [TACAN] Principles 40200.) NOTE: The directed study course 44207 and the on-the-job training course 43700 are taken together to provide an alternate way of learning the knowledge and skills presented in the course 40239.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Engineering Technology (1 lecture, 1 laboratory) (4/75). NOTE: If Course 1 is not completed, Courses 2 and 3 must both be completed to receive credit.

**FAA equivalent:** FD-220 Rho-Theta Navigation Equipment, Model GRN-9/ RTC-1.

### Rho-Theta Navigation Equipment, RTB-2 (40237)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** July 1972—June 1981.

**Objective:** To train technicians responsible for the installation, certification maintenance, and evaluation of the RTB-2 beacon and RTA-2 antenna.

**Instruction:** Operating principles; comprehensive circuit analysis; techniques of failure diagnosis. The course is equally divided between classroom lectures and laboratory demonstration and performance exercises. (Prerequisite: Rho-Theta [TACAN] Principles 40200.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Engineering Technology (1 lecture, 1 laboratory) (4/75).

**FAA equivalent:** FD-250 RTB-Transponder.

### Rho-Theta (TACAN) Principles (40200)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 280 hours (7 weeks).

**Dates:** July 1973—June 1981.

**Objective:** To provide the technician with basic principles necessary for successful completion of specific Rho-Theta (TACAN) Navigation Equipment courses.

**Instruction:** Principles of pulse and microwave circuits as applied to Rho-Theta Navigation Systems. Tuned amplifiers; oscillators; multivibrators; mixers; discriminators and detectors; wave-shaping and sweep circuits; pulse modulation and demodulation; transmission lines; antennas; magnetic amplifiers. One-third of the course is devoted to laboratory instruction. (Prerequisite: Electronic Fundamentals and Engineering Mathematics 44504.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 7 semester hours in Pulse and Microwave Electronics (5 lecture, 2 laboratory) (4/75).

**FAA equivalent:** FD-200 TACAN Principles.

### RML RF Retune (40346)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 40 hours (1 week).

**Dates:** August 1973—June 1981.

**Objective:** To train technicians on the equipment and in the procedures required to satisfactorily effect frequency changes in all tuned waveguide, cavity, and RF filter components in the Radar Microwave Link (RML) systems.

**Instruction:** Laboratory experiences focus on carrying out on the operating link system major changes in all seven to eight GHz RF channel frequency determining elements such as Klystron tuning cavities, reference frequency cavities, waveguide bandpass filters, common waveguide coupling devices and automatic frequency control loops. The technicians ascertain that adjacent channel frequencies are minimum, and that bandwidth frequency response and power levels of all channels are within approved standards and tolerance. (Prerequisite: Any RML course.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Communications Electronics (laboratory) (6/78). NOTE:In order to receive credit for this course, a student must also have successfully completed Radar Microwave Link System RML-1/2/3/4 (RML-T/R) 40322.

## Runway Visual Range Equipment, IRA System (40229)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** August 1970—June 1981.

**Objective:** To train technicians responsible for the installation, evaluation, maintenance and certification of the Runway Visual Range, IRA System.

**Instruction:** Logic circuit boards; time base generator; function generator; background and transmission counters; answer translator, data transmitter, registers, computer selector; and the transmissometer system. Laboratory sessions include fault diagnosis, performance analysis, test procedures, use of the test equipment, and routine checks and adjustments. (Prerequisites: Runway Visual Range Equipment, IRA System 44213, Digital Logic Principles 40402, and Solid State Devices 44509.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering Technology (1 lecture, 2 laboratory) (6/75).

**FAA equivalent:** FC-198 or 40209 RVR.

## Runway Visual Range Equipment, Type FA-7861 (40213)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** April 1969—June 1981.

**Objective:** To train technicians responsible for the installation, evaluation, maintenance, and certification of the RVR, FA-7861 System.

**Instruction:** Logic circuit boards; background and transmission counters; buffer storage register; coding matrices; indicators and drivers; data transmitter; light setting receiver; the transmissometer system. Half of the course is devoted to laboratory sessions which develop skills in fault diagnosis, performance analysis, test procedures and equipment, and routine checks and adjustments. (Prerequisites: Digital Logic Principles 40402 and Solid State Devices 44509 or 44712.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering Technology (1 lecture, 2 laboratory) (4/75).

**FAA equivalent:** FC-199 RVR FA 7861.

## Sensor, Receiver, and Processor (SRAP) (42010)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** April 1978—June 1981.

**Objective:** To train technicians responsible for the operation and maintenance of the Sensor/Receiver and Processor (SRAP) equipment which detects and processes both radar and beacon data for the FAA's Automated Radar Terminal System (ARTS) III-A.

**Instruction:** SRAP system overview; microcontroller operation; diagnostic programming; radar data acquisition; beacon data acquisition; message formatting; interfacing with the ARTS-III-A system. (Prerequisite: Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Computer Technology (2 lecture, 2 laboratory) (6/78).

## SMMC for Engineers (43421)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 80 hours (2 weeks).

**Dates:** October 1972—September 1977.

**Objective:** To train systems engineers responsible for the evaluation of the National Airspace System operation from the System Maintenance Monitor Console.

**Instruction:** Evaluation of each module of the System Maintenance Monitor Console and of the system operation as related to each module. En route air traffic control center environmental alarms analysis and radar information as displayed on the Random Access Planned Position Indicator (RAPPI). (Recommended prerequisite: IBM 9020 CCC for Engineers 43463, NAS En Route I/O Equipment for Engineers 43412, and NAS En Route Operational Program for Engineers 43420.)

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Computer Technology (7/75).

### 1. Solid State Devices (44712)
### 2. Solid State Devices (44509)

**Location:** (Correspondence).

**Length:** 1. Prerequisite Validation Examination (PVE 500).
2. Directed study (approximately 160 hours).

**Dates:** July 1972—December 1979.

**Objective:** To provide the technician with basic knowledge of solid state devices necessary for successful completion of specific equipment courses.

**Instruction:** Basic operation and characteristics of semiconductor diodes, biopolar and field effect transitors, triacs, and thyristors; a qualitative analysis of amplifier circuits; differential amplifiers; switching circuits; multivibrators. (Prerequisite for Course 2: Foundation Mathematics 44502.)

**Credit recommendation: Course 1 or 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Solid State Devices (4/75).

**FAA equivalent: Course 2:** 40509 Solid State Devices **or** FV-500 or 40503 Transistor Electronics **or** DFG-41 or 44507 Semi Conductor/Transistor Circuit.

### Solid State Fundamentals for Electromechanics (40115 or 44107)

Refer to Environmental Support System Concepts (40117).

### Standby Power and Distribution Panel (40130)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 240 hours (6 weeks).

**Dates:** May 1976—June 1981.

**Objective:** To train technicians in the installation, maintenance, and evaluation of the standby power and distribution equipment for Air Route Traffic Control Centers.

**Instruction:** Heavy duty power breakers; battery maintenance and testing; automatic engine synchronizers, electrical control devices, control circuits, and switch gear components; operation, evaluation, and troubleshooting of the complete electrical system. (Prerequisites: Electrical Principles—Phase II 40126 and 550 KW Diesel Engine Generators 40129.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Electrical Technology (2 lecture, 2 laboratory) (6/78).

### System Maintenance Monitor Console (43432)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** April 1973—June 1981.

**Objective:** To train technicians responsible for the installation, maintenance, and repair of the System Maintenance Monitor Console.

**Instruction:** Detailed logic diagrams of the System Maintenance Monitor Console. Laboratory sessions include maintenance problems and procedures. Prerequisites: Digital Logic Principles 40402 and Solid State Devices 44509.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Computer Technology (1 lecture, 2 laboratory) (6/75).

### Test Equipment Console Test Cart (43419)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 240 hours (6 weeks).

**Dates.** August 1971—June 1981.

**Objective:** To provide the technician with basic background needed to operate and maintain the test equipment console test cart.

**Instruction:** Machine language computer programming and architecture; diagnostic programming and circuitry; magnetic tape transport and controller; logic multiplexer; buffer memories; peripheral controllers. (Prerequisite: Principles of Digital Logic and Data Processing 44411.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Computer Technology (3 lecture, 3 laboratory) (6/75).

### VHF Omnirange Equipment (VOR) (40205)

**Location:** FAA Academy, FAA Aeronautical Center, Oklahoma City, OK.

**Length:** 120 hours (3 weeks).

**Dates:** January 1967—June 1981.

**Objective:** To train technicians responsible for the installation, maintenance, and evaluation of VOR equipment.

**Instruction:** Detailed analysis of a VOR system, system components, and monitor; phase modulation; navigation geometry; transmitter and receiver principles; antenna radiation patterns. Laboratory instruction includes practice in comprehensive system operation, adjustment, and calibration. (Prerequisite: Advanced ILS/VOR Principles 40204.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Communications Electronics (2 lecture, 2 laboratory) (4/75).

**FAA equivalent:** FV-200 VHF Omnirange.

## Visual Approach Slope Indicators (Solid State) (40125)

**Location:** FAA Academy, Oklahoma City, OK.
**Length:** 80 hours (2 weeks).
**Dates:** March 1977—June 1981.

**Objective:** To provide training in the operation and maintenance of specific equipment used in airport approach navigational aid lighting systems.

**Instruction:** Operating principles, comprehensive circuit analysis, and techniques of fault diagnosis for constant voltage controlled visual approach slope indicator (VASI) lights, constant current controlled visual approach slope indicator lights, and solid-state controlled VASI systems. Laboratory sessions include fault diagnosis, performance analysis, test procedures, use of the test equipment, and routine checks and adjustments. (Prerequisites: Electrical Principles 40100 and Electrical Principles—Phase II 40126.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electrical Technology (1 lecture, 1 laboratory) (6/78).

## Visual Landing Aids System (40123)

**Location:** FAA Academy, Oklahoma City, OK.
**Length:** 80 hours (2 weeks).
**Dates:** October 1977—June 1981.

**Objective:** To provide training in the operations and maintenance of specific equipment used in airport visual approach navigational aid lighting systems.

**Instruction:** Operating principles, comprehensive circuit analysis, and techniques of fault diagnosis for Runway End Indentifier Strobe Lights, Runway Alignment Strobe Lights, Runway Threshold Light Markers, and Medium Intensity Approach Lights. Laboratory sessions include fault diagnosis, performance analysis, test procedures, use of the test equipment, and routine checks and adjustments. (Prerequisite: Electrical Principles 40100.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electrical Technology (1 lecture, 1 laboratory) (6/78).

# FLIGHT SERVICE STATION TRAINING PROGRAM

Flight Service Stations (FSS) are located throughout the country and provide assistance to pilots who must obtain information within the station's particular area, including terrain, weather conditions, preflight and inflight weather information, suggested routes, altitudes, indications of turbulence, icing, and any other information important to the safety of a flight. The Flight Service Station is one of three components of Air Traffic Control Services.

The National Flight Service Station Air Traffic Training Program is a standardized instructional program for FSS employees from entrance on duty through the full performance level. All but two of the courses listed below are taken in residence at the FAA Academy. The on-the-job training experience was designed at the Academy and is administered by local supervisory personnel. The on-the-job training objectives are an expansion of previously completed training.

Source of official student records: Registrar Unit, AAC-911A, Federal Aviation Administration Academy, Aeronautical Center, P.O. Box 25082, 6500 S. MacArthur, Oklahoma City, Oklahoma 73125.

## En Route Flight Advisory Service (50201)

**Location:** FAA Academy, Oklahoma City, OK.
**Length: Version 1:** 120 hours (3 weeks).
**Version 2:** 160 hours (4 weeks).
**Dates: Version 1:** January 1972—November 1978.
**Version 2:** November 1978—June 1981.

**Objective:** To prepare selected journeyman specialists to provide timely and meaningful weather service information directly to pilots in flight.

**Instruction: Version 1:** Pilot briefers' responsibilities and legal obligations; meteorology, including atmospheric structure, hazardous conditions, chart and map discussion, weather radar, and aviation forecasts; aircraft types and characteristics; pilot weather reports; pilot briefing and techniques. **Version 2:** Meteorological theory; aviation weather hazards; weather charts; geographical areas; radar fundamentals and reporting; communication broadcast and briefing techniques; satellite imagery weather elements; orographics. (Prerequisite: Flight Service Station Initial Qualification Training Program 50200 or equivalent FSS Qualification.)

**Credit recommendation: Version 1:** In the lower division baccalaureate/ associate degree category, 4 semester hours in Meteorology (3 lecture, 1 laboratory) and 6 semester hours in Air Traffic Control (4 lecture, 2 laboratory) (5/79). **Version 2:** In the lower division baccalaureate/associate degree category, 4 semester hours in Meteorology (3 lecture, 1 laboratory) and 8 semester hours in Air Traffic Control (5 lecture, 3 laboratory) (5/79). NOTE: Credit should *not* be awarded for Version 1 of this course if credit is awarded for Pilot Briefing Training 50205.

### Flight Service Operations (50223)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 440 hours (11 weeks).

**Dates:** October 1978—June 1981.

**Objective:** To provide comprehensive technical training in the duties and functions required in the Flight Service Station component of the Air Traffic Control profession.

**Instruction:** Weather observation, including sky and ceiling, visibility, atmospheric phenomena, pressure, temperature and humidity, wind, precipitation measurement, and additive data. Teletype; broadcast; flight data; preflight and inflight weather conditions; emergency services. Course consists of lecture and laboratory exercises. (Prerequisites: Fundamentals of Air Traffic Control 50222 and Indoctrination and Pre-Qualification 55221, or the equivalent of these two courses.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Meteorology (3 lecture, 1 laboratory) and 20 semester hours in Air Traffic Control (15 lecture, 5 laboratory) (5/79).

### Fundamentals of Air Traffic Control (50222)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 160 hours (4 weeks).

**Dates:** January 1976—June 1981.

**Objective:** To provide candidates for the Air Traffic Control (ATC) profession with the fundamental prerequisite knowledge needed to function in that profession.

**Instruction:** Theory of flight; aircraft classification and performance; aviation weather; basic air navigation; federal air regulations; ATC communications and procedures; air traffic facilities; basic radar; flight assistance service; national airspace system. (Prerequisite: Indoctrination and Pre-Qualification 55221.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Air Traffic Control (5/79).

### GOES Satellite Weather Data (50206)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 32 hours (4 days).

**Dates:** November 1978—June 1981.

**Objective:** To prepare the journeyman flight service specialist to interpret weather satellite imagery.

**Instruction:** Satellite imagery; surface synoptic systems; restrictions to visibility; mesoscale phenomena; laser fax maintenance.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Meteorology (5/79). NOTE: Credit should *not* be awarded for this course if credit is awarded for Version 2 of En Route Flight Advisory Service 50201.

### Pilot Briefing Refresher (55202)

**Location:** Flight Service Stations throughout the country.

**Length:** 68 hours (8½ days).

**Dates:** June 1978—June 1981.

**Objective:** To provide comprehensive refresher training in all aspects of pilot weather briefing service for all journeyman briefers in Flight Service Stations (FSS).

**Instruction:** Pilot briefers' responsibilities and legal obligations; aircraft types and characteristics; pilot weather reports; pilot briefing format and techniques; meteorology, including atmospheric structure, air movement, clouds and precipitation, hazardous conditions, and aviation forecasts. (Prerequisite: FSS Qualification Course or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Meteorology and 1 semester hour in Air Traffic Control (5/79). NOTE:Credit should *not* be awarded for this course if credit is awarded for Pilot Briefing Training 50205.

### Pilot Briefing Training (50205)

**Location:** FAA Academy, Oklahoma City, OK.

**Length:** 136 hours (17 days).

**Dates:** February 1978—June 1981.

**Objective:** To prepare instructors to provide comprehensive refresher training in all aspects of pilot weather briefing service for all journeyman briefers in Flight Service Stations.

**Instruction:** Pilot briefers' responsibilities and legal obligations; meteorology, including atmospheric structure, hazardous conditions, chart and map discussion, weather radar and aviation forecasts; aircraft types and characteristics; pilot weather reports; pilot briefing format and techniques. Course also involves tutorial practice laboratories in which instructors teach lesson plans in above topics. (Prerequisite: Basic Instructor Training 10501 or Facility Instructor Training 10510.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Meteorology (3 lecture, 1 laboratory) and 6 semester hours in Air Traffic Control (4 lecture, 2 laboratory). NOTE: Credit should *not* be awarded for this course if credit is awarded for Pilot Briefing Refresher 55202.

## Position Qualification/Facility Certification (55224)

**Location:** Flight Service Stations throughout the country.

**Length:** Maximum of 1040 hours (26 weeks).

**Dates:** January 1978—June 1981.

**Objective:** To provide operational training within a specific Flight Service Station (FSS) leading to qualification and certification as a Flight Service Specialist.

**Instruction:** On-the-job practicum in which the student applies knowledge and skills previously learned in Flight Service Operations 50223 in the performance of the full range of FSS functions. In addition, the student develops and demonstrates a comprehensive knowledge of the geographical area of the Flight Service Station. This on-the-job practicum is designed by the FAA Academy and conducted by a local training officer or supervisor. (Prerequisite: Flight Service Operations 50223 or previous FSS Qualification.)

**Credit recommendation:** In the upper division baccalaureate category, 9 semester hours in Air Traffic Control (5/79).

# FEDERAL RESERVE BANK OF NEW YORK

The Federal Reserve Bank of New York is one of 12 regional banks which constitute the Federal Reserve System. The System's functions are to formulate and administer monetary policy, regulate and supervise banking, maintain an adequate flow of coin and paper money, and serve as fiscal agent for the Federal Government.

The Training Division of the Bank's Personnel Department offers training and development opportunities in management and supervisory skills, job-related skills, office skills, and language skills. The Training Division also administers the Bank's tuition payment program, provides educational counseling, and administers the performance appraisal program for nonsupervisory employees.

Source of official student records: Training Director, Training Division, Personnel Department, Federal Reserve Bank of New York, 33 Liberty Street, New York, New York 10045.

## Beginning Stenography (Stenoscript) (FA-140)

**Location:** Head Office, 33 Liberty Street, New York, NY.

**Length:** 130 hours (26 weeks).

**Dates:** September 1974—June 1981.

**Objective:** To provide the student with an understanding of the principles of Stenoscript Shorthand in order to develop skill in shorthand dictation and transcription of business letters.

**Instruction:** Theory instruction in Stenoscript ABC Shorthand; speed dictation, including bank terminology; transcription exercises for spelling, punctuation, word usage, typing style, and proofreading; typewritten transcription practice. Upon completion of the course, students are able to take dictation at a minimum speed of 60 words per minute for three minutes and to transcribe mailable transcripts on the typewriter.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Science (5/77). NOTE: Credit should *not* be awarded for this course if credit is awarded for Refresher Stenography (FA-141).

## Beginning Typing (FA-135)

**Location:** Head Office, 33 Liberty Street, New York, NY.

**Length:** 120 hours (24 weeks).

**Dates:** September 1975—June 1981.

**Objective:** To provide the student with basic skills in typewriting, and to develop production standards for letters, memoranda, tabulations, and rough drafts.

**Instruction:** Mastery of the keyboard with a minimum attainment level of 35 words per minute with a maximum of five errors on a five-minute timing; business letters; tabulations; memoranda; outlines; business forms; rough drafts; making corrections; use of punctuation and capitalization. Audiovisuals, cassette tapes, and texts are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Science (5/77). NOTE: Credit should *not* be awarded for this course if credit is awarded for Refresher Typing (FA-136).

## Refresher Stenography (FA-141)

**(Formerly Shorthand Dictation and Transcription, and Stenography Review [FA-141]).**

**Location:** Head Office, 33 Liberty Street, New York, NY.

**Length:** 42 hours (14 weeks).

**Dates:** April 1975—June 1981.

**Objective:** To prepare the student who has had previous shorthand instruction and/or experience for future assignment as a stenographer; to enable the individual currently employed as a stenographer to improve his/her skills.

**Instruction:** This course, which covers the material presented in Beginning Stenography (Stenoscript FA-140), is offered to employees who have knowledge of shorthand theory and the ability to take a one-minute dictation (and transcribe by typewriter) at 60 words per minute. Upon completion, students are able to take dictation at a minimum speed of 80 words per minute for three minutes and to transcribe mailable transcripts on the typewriter.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Science (5/77). NOTE: Credit should *not* be awarded for this course if credit is awarded for Beginning Stenography (Stenoscript) (FA-140).

## Refresher Typing (FA-136)

**Location:** Head Office, 33 Liberty Street, New York, NY.

**Length:** 42 hours (14 weeks).

**Dates:** September 1975—June 1981.

**Objective:** To prepare the student who has had previous typewriting instruction and/or experience for future assignment as a typist; to enable the individual currently employed as a typist to improve his/her skills.

**Instruction:** This course, which covers the material presented in Beginning Typing (FA-135), is offered to employees who have some knowledge of typing procedures and who can touch type at least 20 words per minute. Depending on their level on entering the course, upon completion, students are able to type at a speed of 35-40 words per minute with a maximum of five errors on a five-minute timing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Science (5/77). NOTE: Credit should *not* be awarded for this course if credit is awarded for Beginning Typing (FA-135).

### Shorthand Dictation and Transcription

Refer to Refresher Stenography (FA-141).

### Stenography Review (FA-141)

Refer to Refresher Stenography (FA-141).

# GENERAL DYNAMICS CORPORATION
# ELECTRIC BOAT DIVISION

General Dynamics, with corporate headquarters in St. Louis, Missouri, is a major developer and builder of weapons systems. The various divisions also produce commerical aircraft, commercial ships, communication equipment, and mineral sevices.

The Electric Boat Division is an internationally known pioneer designer and builder of submarines. The Company has placed particular emphasis on continued education as one means for understanding the rapid technological changes and state-of-the-art in shipbuilding. The extensive offering of semester-length training programs is just one example of the importance placed on continued education of the employees.

Source of official student records: Personnel Services Department, General Dynamics/Electric Boat Division, Eastern Point Road, Groton, Connecticut 06340.

## Basic Digital Techniques

**Location:** Electric Boat Training Facility, Chicago Avenue, Groton, CT.

**Length:** 39 hours (13 weeks).

**Dates:** January 1980—Present.

**Objective:** To provide participants with the fundamental principles of digital techniques and the capability of applying these concepts through classroom experiments.

**Instruction:** Digital techniques: semiconductor devices; combinational logic circuits; digital integrated circuits; Boolean algebra; sequential logic circuits; digital design techniques and applications. Exposure to each major concept is supplemented with student-run "breadboard" experiments.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Computer Technology or Data Processing (10/80).

## Introduction to Microprocessor Concepts (INTEL 8080/8085)

**Location:** Electric Boat Training Facility, Chicago Avenue, Groton, CT.

**Length:** 30 hours (10 weeks).

**Dates:** April 1980—Present.

**Objective:** To provide participants with an introduction to the fundamentals of a microprocessor and machine/assembler level programming through coding and executing of programs on the INTEL 8080/8085 microprocessors.

**Instruction:** Computer numbering systems; basic computer structure; SDK-85 System Design Kit; INTEL 8080 and 8085 architecture; addressing modes; instruction types; programming; input/output programs.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Computer Technology or Data Processing (10/80).

## Microprocessor Concepts (RCA-1802)

**Location:** Electric Boat Training Facility, Chicago Avenue, Groton, CT.

**Length:** 30 hours (10 weeks).

**Dates:** June 1980—Present.

**Objective:** To provide participants with an introduction to the fundamentals of a microprocessor and machine/assembler level programming through coding and executing of programs on the RCA-1802 microprocessor.

**Instruction:** Computer numbering systems; basic computer structure; RCA-1802 architecture; addressing modes; instruction types; programming; input/output programs.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Computer Technology or Data Processing (10/80).

## Using Computers to Manage

**Location:** Electric Boat Training Facility, Chicago Avenue, Groton, CT.

**Length:** 36 hour (9 weeks).

**Dates:** October 1980—Present.

**Objective:** To provide managers and professionals with a working knowledge of the computer, operations, business systems development, and related documents and controls.

**Instruction:** Introduction to data processing and the system development process. Understanding the data processing function; defining the process; selecting methods; determining value; interfacing with the data processing organization; system controls and documentation; project control; integrated systems.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Business Administration, Management, or Management Science (10/80).

# THE GENERAL ELECTRIC COMPANY

The General Electric Company (GE) is primarily engaged in developing, manufacturing, and marketing a wide variety of products used in the generation, transmission, distribution, control, and utilization of electricity. As a result of corporate research and development, GE has also developed businesses in such areas as communications, plastics, medical systems, aircraft engines, and ship propulsion systems. In 1980, employment was approximately 402,000 persons in 142 business operations worldwide.

GE offers many courses to its employees to help accelerate their professional and managerial career development. Whether the courses are single offerings, or are part of an integrated program of study, they are all designed to help individual employees perform more effectively on current jobs, prepare for new jobs, or gain greater personal satisfaction from their work.

Courses are grouped alphabetically under the title of the program of which they are a part. A brief description of each program precedes the group of courses to explain the purpose and general content of the program.

## ADVANCED COURSE IN ENGINEERING

The Advanced Course in Engineering was originally established in 1923 to supply General Electric Company with engineers having sufficient breadth and depth of technical understanding to make basic contributions in the development of new or improved products. The objectives of the course are to provide the recent technical college graduate with:

- the ability to identify and solve real engineering problems;
- competence in writing engineering reports;
- an understanding of the use and misuse of mathematical analysis and other ways of solving engineering problems;
- an understanding that the engineer's primary purpose is not mathematical virtuosity, but the improvement of methods and products.

The Advanced Course is a 3-year program consisting of the company-taught A-, B-, C-Courses and periods of formal academic study on campus. The course material is continuously reviewed, revised, and upated. It includes pertinent basics, state-of-the-art analytical techniques, and topical emphasis relative to changing business needs and products. Graduates of the program earn the Company's Advanced Course certificate.

The A-Course is taught with basic uniformity at the General Electric locations at which it is conducted, and the credit recommendation for that course applies to all those locations. The B- and C-Courses treat subject areas that have special applications to each plant, and the credit recommendations established for those two courses apply only to the locations indicated.

Source of official student records: Manager, Technical Education, General Electric Company, W2F, Fairfield, Connecticut 06431.

### A-Course

**Location:** Various company locations throughout the United States and Canada.

**Length:** 136 hours (34 weeks); approximately 680 hours are devoted to problem solving outside of class.

**Dates:** January 1965—Present.

**Objective:** To develop the ability to solve engineering development and design problems.

**Instruction:** Engineering analysis (application of mathematical techniques to many technical areas). Vibrational analysis; E&M fields; control theory; probability and random variables; heat transfer; structure analysis. Assigned problems support the classwork, are completed outside the class, and are submitted to the instructor for review.

**Credit recommendation:** In the graduate degree category, 12 semester hours in Engineering Analysis or Engineering Science (or 4 semester hours in Applied Mathematics) (6/75). NOTE: The course is broadly interdisciplinary in nature and may not be sufficiently specialized for full credit in highly specialized degree programs.

### B-Course

**Location:** Aerospace Control Systems Department, Binghamton, NY (1/70-12/74 only); Aerospace Electronics Systems Department, Utica, NY; Military Electronic Systems Operations, Syracuse, NY.

**Length: Version 1:** 64 hours (16 weeks); approximately 320 hours are devoted to problem solving outside of class.
**Version 2:** 112 hours (28 weeks); approximately 480 hours are devoted to problem solving outside of class.
**Version 3:** 124 hours (31 weeks); approximately 465 hours are devoted to problem solving outside of class.
**Version 4:** 92 hours (23 weeks); approximately 345 hours are devoted to problem solving outside of class.

**Dates: Version 1:** January 1970–December 1975.
**Version 2:** January 1976–December 1979.
**Version 3:** January 1980–December 1980.
**Version 4:** January 1981–Present.

**Objective:** To teach classical communications theory with emphasis on selected current engineering problems.

**Instruction: Versions 1, 2, 3, and 4:** Amplitude, frequency, and digital modulation schemes; information theory; hypothesis testing; parametric estimation. Kalman filtering; radar design. Assigned problems support the classwork, are completed outside of class, and are submitted to the instructor for review. **Versions 2, 3, and 4:** Also include: Probability theory and stochastic processes; Hilbert transforms and complex envelope; extended information theory concepts; electro-optics; statistical detection theory; sonar techniques; electronic counter measures.

**Credit recommendation: Version 1:** In the graduate degree category, 6 semester hours in Communications Theory and Systems (6/75). **Versions 2 and 3:** In the graduate degree category, 12 semester hours in Communications Theory and Systems (8/76). **Version 4:** In the graduate degree category, 9 semester hours in Communications Theory and Systems (9/81).

## C-Course

**Location:** Aerospace Control Systems Department, Binghamton, NY (1/70-12/74 only); Aerospace Electronic Systems Products Department, Utica, NY; Military Electronic Systems Operations, Syracuse, NY.

**Length: Version 1:** 128 hours (32 weeks); approximately 480 hours are devoted to problem solving outside of class.
**Version 2:** 92 hours (23 weeks); approximately 345 hours are devoted to problem solving outside of class.

**Dates: Version 1:** January 1970–December 1979.
**Version 2:** January 1980–Present.

**Objective:** To teach classical control theory, digital controls, optimal control, and computer applications and systems.

**Instruction:** Classical controls; optimal control; digital signal processing; linear programming; dynamic programming; numerical methods; calculus of variations; integral equations; Markov processes; queuing theory; digital design; microprocessors; computer systems. Assigned problems support the classwork, are completed outside of class, and are submitted to the instructor for review.

**Credit recommendation: Version 1:** In the graduate degree category, 12 semester hours in Electrical Engineering (or 10 semester hours in Computer Science) (6/75). **Version 2:** In the graduate degree category, 9 semester hours in Electrical Engineering (or 7 semester hours in Computer Science) (9/81).

# CONTINUING EDUCATION PROGRAM

The courses listed below are part of the Continuing Education Program which is conducted at many General Electric plants including the following locations in New York State: Auburn, Binghamton, Brockport, Hudson Falls, Schenectady, Syracuse, and Utica.

The courses are offered to General Electric employees wishing to add to or reinforce their knowledge of the field of manufacturing. They cover such topics as mathematics, manufacturing management, and computers.

Please note that the credit recommendations apply to *all* locations where the program is conducted.

Source of official student records: Manufacturing Education Representative in the plant where the courses were completed; or, Manufacturing Education, General Electric Company, Management Development Institute, P.O. Box 368 (Crotonville), Croton-on-Hudson, New York 10520.

## Advanced Methods and Models (AMS 152)

Refer to Mathematical Methods and Models.

## Basic Mathematics (AMS 151)

Refer to Mathematical Methods and Models.

## Cases in Manufacturing Management (AMS 303)

**Location:** General Electric plants: Auburn, NY; Hudson Falls, NY; Schenectady, NY; Syracuse, NY; and Utica, NY; locations throughout the United States and overseas.

166

**Length:** 20 hours (10 weeks).

**Dates:** January 1965—Present.

**Objective:** To introduce the student to the various problems resulting from the interaction of manufacturing management with the other functional areas of the firm.

**Instruction:** A case study approach is used to deal with manufacturing and business management problems. Discussion of each case to identify the real problem or problems and the important considerations involved. Each case is an actual situation in which a manufacturing problem is interrelated with one or more of the other key business functions (marketing, engineering, finance, relations). Involves applications of concepts covered in Basic Manufacturing Studies courses.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Manufacturing Management (2/75).

## GESIMTEL (Simulation with Teleprocessing) (AMS 311)

**Location:** General Electric plants: Auburn, NY; Hudson Falls, NY; Schenectady, NY; Syracuse, NY; and Utica, NY; locations throughout the United States and overseas.

**Length:** 24 hours (8 weeks).

**Dates:** January 1973—Present.

**Objective:** To provide the student with a background in general purpose system simulation and its application methods.

**Instruction:** A study of computer simulation techniques. The GESIMTEL system; modeling methods; control language; I/O format; debugging; applications to algebraic and probabilistic problems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Administration or Computer Science (2/75).

## Mathematical Methods and Models
## 1. Advanced Methods and Models (AMS 152).
## 2. Basic Mathematics (AMS 151).

**Location:** General Electric plants: Auburn, NY; Hudson Falls, NY; Schenectady, NY; Syracuse, NY; and Utica, NY; locations throughout the United States and overseas.

**Length:** 1. 18 hours (9 weeks).
2. 16 hours (8 weeks).

**Dates:** January 1965—Present.

**Objective:** To provide the student with basic mathematical background and skills needed in creating mathematical models and in simulating systems.

**Instruction:** Introduction to descriptive statistics; review of high school algebra; introduction to calculus and partial derivatives; elements of matrices; language of set theory; compound interest; simulation; linear programming; multiple regression.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Administration or Economics (2/75).

## Probabilistic Models (AMS 154)

**Location:** General Electric plants: Auburn, NY; Hudson Falls, NY; Schenectady, NY; Syracuse, NY; and Utica, NY; locations throughout the United States and overseas.

**Length:** 16 hours (8 weeks).

**Dates:** January 1965—Present.

**Objective:** To introduce the student to statistical and probabilistic ideas through Markov and stochastic processes with application to queuing theory.

**Instruction:** Basic ideas of probability; binomial and geometric distribution; Markov processes; uniform and normal distribution; Monte Carlo Method, queuing theory, decision models and metamathematics; statistics (means, variances, and correlation coefficients).

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Business Administration or Economics (2/75).

## Regression Analysis (AMS 320)

**Location:** General Electric plants: Bethesda, MD; Schenectady, NY; Wilmington, NC.

**Length:** 24 hours (12 weeks).

**Dates:** January 1969—May 1980.

**Objective:** To provide the student with applied knowledge of basic regression models.

**Instruction:** Simple linear regression model; multiple regression models; least squares method of estimating the parameters of the models; interpretation of computer output.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Business Administration or Economics (2/75).

## Statistical Inference (AMS 153)

**Location:** General Electric plants: Auburn, NY; Hudson Falls, NY; Schenectady, NY; Syracuse, NY; and Utica, NY; locations throughout the United States and overseas.

**Length:** 16 hours (8 weeks).

**Dates:** January 1965—Present.

**Objective:** To provide the student with a background in statistical inference for computer applications.

**Instruction:** Background in statistical inference involving numerical data. Statistical populations; principles of sampling; statistical estimation; quantitative conclusions; statistical decisions.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Business Administration or Mathematics (2/75).

## FIELD ENGINEERING PROGRAM

The courses listed below are part of the Field Engineering Program (Mechanical). The Program was established in 1966 by the Installation and Service Engineering Division. Its purpose is to prepare individuals who have a sound academic and practical background for the position of Field Engineer or Field Representative. Persons holding these positions provide field engineering services on power generation equipment: gas and steam turbines, turbo-generators, and marine propulsion machinery. Services include technical direction of installation, start-up, emergency repairs, and maintenance; and project planning and management for all aspects of the work. Courses are conducted at the Field Engineering Development Center in Schenectady, New York.

Source of official student records: Manager, Internal Technical Training (Mechanical), Field Engineering Development Center, General Electric Company, 2690 Balltown Road, Schenectady, New York 12309.

### Applied Electrical Principles

**Location:** Field Engineering Development Center, 2690 Balltown Road, Schenectady, NY.

**Length: 60 hours (4 weeks).**

**Dates:** January 1979 – Present.

**Objective:** To provide an understanding of the practical application of electrical engineering principles to rotating machinery, related equipment, and systems, with particular emphasis on applications to gas turbines and steam turbines.

**Instruction:** Review of basic electrical theory; electrical meters and measurement; electrical diagrams; motor controls, installation and maintenance; electrical construction practices; electrical control equipment; electrical safety; large generator construction and operation. Laboratory sessions focus on D.C. and A.C. circuits, measuring instruments, and motor controls.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Electrical Measurements Laboratory (2/79). NOTE: A student should complete either Gas Turbine Technology or Steam Turbine Technology to receive credit for this course.

### Applied Mechanical Principles

**Location:** Field Engineering Development Center, 2690 Balltown Road, Schenectady, NY.

**Length:** 80 hours (4 weeks).

**Dates:** January 1979 – Present.

**Objective:** To provide an understanding of the practical application of mechanical engineering principles as they apply to rotating machinery, related equipment, and systems, with particular emphasis on applications to gas turbines and steam turbines.

**Instruction:** Interpretation of engineering drawings; techniques in project planning; use of precision measuring instruments; alignment techniques; threaded fasteners; piping; gears; welding procedures and techniques; nondestructive testing; techniques in lifting and rigging; hydraulic controls.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Mechanical Engineering Laboratory (2/79). NOTE: A student should complete either Gas Turbine Technology or Steam Turbine Technology to receive credit for this course.

### Gas Turbine Technology

**Location:** Field Engineering Development Center, 2690 Balltown Road, Schenectady, NY.

**Length:** 200 hours (5 weeks); additional one-week field trip.

**Dates:** January 1979 – Present.

**Objective:** To develop an understanding of the fundamental principles of gas turbine design, construction, operation, and maintenance.

**Instruction:** Gas turbine theory and component functions; gas turbine auxiliary systems; gas turbine installation; gas turbine controls, start-up, and operation; gas turbine maintenance. Lectures are supplemented by laboratory sessions and field trips. (Prerequisites: Applied Electrical Principles and Applied Mechanical Principles.)

**Credit recommendation:** In the upper division baccalaureate category, 5 semester hours in Gas Turbine Technology (3 lecture, 2 laboratory) (2/79). NOTE: In addition to submitting an official student record, the Field Engineering Training Center should submit a copy of the student's Field Engineering Program Performance Evaluation for a student before a college grants credit for this course.

### Steam Turbine Technology

**Location:** Field Engineering Development Center, 2690 Balltown Road, Schenectady, NY.

**Length:** 240 hours (6 weeks); additional one-week field trip.

**Dates:** January 1979 – Present.

**Objective:** To develop an understanding of the fundamental principles of steam turbine design, construction, operation, and maintenance.

**Instruction:** Steam turbine theory and component functions; steam turbine auxiliary systems; steam turbine installations; steam turbine controls, start-up and operation; steam turbine maintenance. Lectures are supplemented by laboratory sessions and field trips. (Prerequisites: Applied Electrical Principles and Applied Mechanical Principles.)

**Credit recommendation:** In the upper division baccalaureate category, 6 semester hours in Steam Turbine Technology (4 lecture, 2 laboratory) (2/79). NOTE: In addition to submitting an official student record, the Field Engineering Development Center should submit a copy of the student's Field Engineering Program Performance Evaluation for a student before a college grants credit for this course.

## MANAGEMENT PROBLEMS ANALYSIS PROGRAM

The courses listed below constitute the Management Problems Analysis (MPA) Program. It is an 11-month program designed to teach modern quantitative techniques and to effectively apply those methods to the analysis of business problems and to the subsequent decision-making process.

Each student completes all eight modules which make up the program during the course of the 11 months. Each program participant is required to attend classroom instruction, and to write seven reports which describe his or her application of newly learned techniques to specific on-the-job problems. At the end of the program, the student is required to submit a major project, which involves usually another 60 hours of independent study.

Since its inception in 1962, MPA has been offered at 21 GE locations, and since 1973 has been offered at the following ten: Chicago, Illinois; Evendale, Ohio; Fort Wayne, Indiana; Louisville, Kentucky; Lynn, Massachusetts; Milwaukee, Wisconsin; Philadelphia, Pennsylvania; Pittsfield, Massachusetts; Schenectady, New York; and Valley Forge, Pennsylvania. The credit recommendations listed below apply to all locations where the program has been offered since 1973.

Source of official student records: Manufacturing Education Representative in the plant where the courses were completed; or, Manufacturing Education, General Electric Company, Management Development Institute, P.O. Box 368 (Crotonville), Croton-on-Hudson, New York 10520.

### Economic Analysis of Alternatives

**Length:** 24 hours.

**Dates:** January 1973—Present.

**Objective:** To provide the student with an appreciation of the time value of money and its effect on the decision-making process.

**Instruction:** The effect of time on the economic analysis of alternatives. Concepts of compound interest; present value analysis and internal rate of return; the effect of taxes and depreciation on cash flows.

**Credit recommendation:** In the graduate degree category, 1 semester hour in Business Administration or Engineering Management (2/75).

### GESIMTEL (Simulation with Teleprocessing)

**Length:** 24 hours.

**Dates:** January 1973—Present.

**Objective:** To provide the student with practical background in using General Purpose System Simulator (GPSS) and its application in graphical data analysis and statistical inference.

**Instruction:** Background in GESIMTEL and its applications. The GESIMTEL system; modeling techniques; computer I/O formats; histograms; probabilty plots; crossplots; applications to manufacturing information systems (marketing, engineering, and finance).

**Credit recommendation:** In the graduate degree category, 2 semester hours in Business Administration or Engineering Management (2/75).

### Introduction to Probability Theory and Descriptive Statistics

**Length:** 18 hours.

**Dates:** January 1973—Present.

**Objective:** To provide the student with basic probabilistic concepts and skills in combinatorial computations and an understanding and skill in using frequency distribution.

**Instruction:** Basic probability theory (sets, sample space, events, symbolic probabilities, probability computations, probability trees, combinatorial computation); frequency distribution; grouping of individual data; histograms and frequency polygons; calculation of mean, variance, and standard deviation; uniform and normal distribution.

**Credit recommendation:** In the graduate degree category, 1 semester hour in Business Administration, Economics, or Engineering Management (2/75).

### Modeling

**Length:** 36 hours.

**Dates:** January 1973—Present.

**Objective:** To provide the student with a first simulation experience and to equip the student with some basic discrete and continuous probability distributions.

**Instruction:** Introduction to modeling and use of random numbers; Bernoulli processes; Poisson processes; Bayesian inference. In particular, the binomial, geometric, Pascal, Poisson, exponential, and gamma distributions. Applications to queuing theory, inventory, and man/machine mixture problems.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Business Administration, Economics, or Engineering Management (2/75).

### Operations Research and Applications Training

**Length:** 45 hours.

**Dates:** January 1973—Present.

**Objective:** To familiarize the student with quantitative models useful for decision making and the steps involved in incorporating these into a business strategy.

**Instruction:** A series of mathematical models and techniques found useful in decision making. Linear programming models; PERT/CPM; forecasting techniques; the learning curve; reliability concepts. Discussion involving the development of skills in planning decision-making strategies and presenting conclusions and recommendations is included.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Business Administration or Engineering Management (2/75).

### Regression Analysis

**Length:** 39 hours.

**Dates:** January 1973—Present.

**Objective:** To provide the student with applied knowledge of linear statistical models.

**Instruction:** Applied linear statistical models dealing with simple and multiple regression models and analysis of variance models. Least squares method; simple and multiple Rho-square polynomial regression models; step-wise procedures; multicolinearity; computer application; ANOVA with one- and two-variable models; cross and nested models; various designs of experiment. No calculus background is assumed.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Business Administration, Economics, or Industrial Engineering (2/75).

### Statistical Inference

**Length:** 30 hours.

**Dates:** January 1973—Present.

**Objective:** To provide the student with applied knowledge of various statistical inference methods.

**Instruction:** Statistical inference methods dealing with estimation of mean, difference between two means, variance, ratio of variances (hypothesis testing and confidence interval methods); Goodness of Fit test; graphical data analysis.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Business Administration, Economics, or Engineering Management (2/75).

### Time-Sharing System and Applications

**Length:** 18 hours.

**Dates:** January 1973—Present.

**Objective:** To provide the student with background in BASIC programming techniques and their applications to management problem analysis programs.

**Instruction:** Background in time-sharing systems and applications. Flowcharting; BASIC language coding; editing; debugging; file organization subroutine; GE Mark III time-sharing system principles and operations; statistical analysis program packages. Hands-on applications, problem solving, and project design are emphasized.

**Credit recommendation:** In the graduate degree category, 1 semester hour in Business Administration, Computer Science, or Engineering Management (2/75).

## MANUFACTURING STUDIES PROGRAM

The courses listed below are part of a two-year integrated curriculum called the Manufacturing Studies Program. Each course meets for two hours per week after working hours. Two courses are taken concurrently from September to June. The program is conducted at many GE plants including the following locations in New York State:Auburn, Binghamton, Brockport, Hudson Falls, Schenectady, Syracuse, and Utica.

The general objective of the program is to provide an opportunity for individuals capable of college-level work to further develop knowledge and technical abilities applicable in such fields as manufacturing supervision, materials management, manufacutring engineering, quality control, information systems, and employee relations. The program is designed for engineers, specialists, supervisors, and managers.

Because of the modular structure of the curriculum, the courses have been grouped together in order to establish appropriate credit recommendations. While credit recommendations have been made for each separate group of courses, when awarding credit particular consideration should be given to those who have completed the total program.

Please note that the credit recommendations listed below apply to all GE locations where the program is offered.

Source of official student records: Manufacturing Education Representative in the plant where the courses were completed; or, Manufacturing Education, General Electric Company, Management Development Institute, P.O. Box 368 (Crotonville), Croton-on-Hudson, New York 10520.

### Computer Programming and Data Analysis (Unit I)

1. **Data Analysis and Probability Evaluation (MFG 220)**
2. **Introduction to Computers (MFG 111 or 111B)**
3. **Manufacturing Information Systems (MFG 211)**

**Location:** General Electric plants: Auburn, Hudson Falls, Schenectady, Syracuse, and Utica, NY; locations throughout the United States and overseas.

**Length:** 1. 24 hours (12 weeks).
2. 20 hours (10 weeks).
3. 20 hours (10 weeks).

**Dates:** September 1965—Present.

**Objective:** To provide an introduction to basic concepts in computer programming and statistical analysis.

**Instruction:** Characteristics and limitations of computers; use of FORTRAN and BASIC programming language in solving problems; introductory statistical concepts (measures of central tendency and variability, statistical inference, discrete sampling distributions, and correlations analysis).

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Computer Programming and Data Analysis (2/74).

### Data Analysis and Probability Evaluation (MFG 220)

Refer to Computer Programming and Data Analysis (Unit I).

### Economic Analysis of Alternatives (MFG 130)

Refer to Managerial Accounting and Cost Analysis (Unit III).

### Employee Relations in Manufacturing (MFG 105)

Refer to Personnel Administration (Unit V).

### Individual and Group Relations on the Job (MFG 102)

Refer to Personnel Administration (Unit V).

### Industrial Engineering (Unit II)

1. **Manufacturing Materials and Processes (MFG 108)**
2. **Product Engineering (MFG 250)**

**Location:** General Electric plants: Auburn, Hudson Falls, Schenectady, Syracuse, and Utica, NY; locations throughout the United States and overseas.

**Length:** 1. 24 hours (12 weeks).
2. 10 hours (5 weeks).

**Dates:** September 1965—Present.

**Objective:** To provide the student with knowledge of manufacturing processes and the product engineering function.

**Instruction:** Study of manufacturing processes and the product engineering function. Introduction to productivity and total design; casting processes; basic machinery and metal forming processes; metal joining processes; use of excellent problems treating these topics. Brief treatment of the type of work involved in designing a product and the impact of the design phase on the manufacturing function, engineering data base, and product documentation.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Industrial Engineering (2/74).

### Introduction to Accounting Principles (MFG 25)

Refer to Managerial Accounting and Cost Analysis (Unit III).

### Introduction to Computers (MFG 111 or 111B)

Refer to Computer Programming and Data Analysis (Unit I).

### Managerial Accounting and Cost Analysis (Unit III)

1. **Economic Analysis of Alternatives (MFG 130)**
2. **Introduction to Accounting Principles (MFG 25)**
3. **Operating Cost, Budgets, and Measurements (MFG 125)**

**Location:** General Electric plants: Auburn, Hudson Falls, Schenectady, Syracuse, and Utica, NY; locations throughout the United States and overseas.

**Length:** 1. 24 hours (12 weeks).
2. 6 hours (3 weeks).
3. 20 hours (10 weeks).

**Dates:** September 1965—Present.

**Objective:** To provide an introduction to basic accounting concepts and principles.

**Instruction:** Basic introduction to accounting concepts and principles with strong emphasis on managerial use of accounting information. Introduction to accounting statements and principles; brief treatment of statement preparation, T-accounts, ledger and journal entries; introduction to cost concepts and analysis, incremental and sunk costs, and budgeting; capital budgeting (discounted cash flows, tax considerations, and alternative equipment replacement policies).

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Managerial Accounting and Cost Analysis (2/74).

## Manufacturing Engineering (MFG 204)

Refer to Manufacturing Management (Unit IV).

## Manufacturing Information Systems (MFG 211)

Refer to Computer Programming and Data Analysis (Unit I).

## Manufacturing Management (Unit IV)

## 1. Manufacturing Engineering (MFG 204)
## 2. Materials Management (MFG 215)
## 3. Quality Control (MFG 217)

**Location:** General Electric plants: Auburn, Hudson Falls, Schenectady, Syracuse, and Utica, NY; locations throughout the United States and overseas.

**Length:** 1. 24 hours (12 weeks).
2. 24 hours (12 weeks).
3. 24 hours (12 weeks).

**Dates:** September 1965—Present.

**Objective:** To provide an introduction to manufacturing management.

**Instruction:** Introduction to management problems in designing and controlling production systems; methods for designing a production process (preparation of plant layouts, job designs, production standards, and assembly line balances); study of the problems of planning and controlling production (forecasting demand, inventory control, production scheduling, and purchasing and traffic management); procedures for organizing the quality control function in manufacturing and the statistical control of product quality variables.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Manufacturing Management (2/74).

## Manufacturing Materials and Process (MFG 108)

Refer to Industrial Engineering (Unit II).

## Manufacturing Organization and Supervision (MFG 101)

Refer to Personnel Administration (Unit V).

## Materials Management (MFG 215)

Refer to Manufacturing Management (Unit IV).

## Operating Costs, Budgets, and Measurements (MFG 125)

Refer to Managerial Accounting and Cost Analysis (Unit III).

## Personnel Administration (Unit V)

## 1. Employee Relations in Manufacturing (MFG 105)
## 2. Individual and Group Relations on the Job (MFG 102)
## 3. Manufacturing Organization and Supervision (MFG 101)

**Location:** General Electric plants: Auburn, Hudson Falls, Schenectady, Syracuse, and Utica, NY; locations throughout the United States and overseas.

**Length:** 1. 16 hours (8 weeks).
2. 24 hours (12 weeks).
3. 16 hours (8 weeks).

**Dates:** September 1965—Present.

**Objective:** To provide knowledge of the organization and management of a firm.

**Instruction:** General approach to the organization and management of a firm; special emphasis on the engineering-type organization and the interpersonal relationships which exist and operate in such an institution; specific aspects of the personnel function; general areas of motivation, organization behavior, and manpower planning.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Personnel Administration (2/74).

## Product Engineering (MFG 250)

Refer to Industrial Engineering (Unit II).

## Quality Control (MFG 217)

Refer to Manufacturing Management (Unit IV).

*The following courses have been evaluated and recommended for credit by the American Council on Education Program on Noncollegiate Sponsored Instruction. For additional information about these courses, contact the American Council on Education Program on Noncollegiate Sponsored Instruction. Office on Educational Credit and Credentials, American Council on Education, One Dupont Circle, Washington, D.C. 20036.*

## AIRCRAFT ENGINE BUSINESS GROUP–MANUFACTURING MATERIALS AND PROCESSES PROGRAM

General Electric has developed programs that prepare key personnel in manufacturing to deal with the processes, materials, equipment, and technology of aircraft engine production. Included are the several segments of Level II (numbered 2.-). Instructors are GE technical personnel involved in development and application of manufacturing processes.

**Source of official student records:** Learning Resource Center, General Electric, Mail Drop 153TL, 1000 Western Avenue, Lynn, Massachusetts 01910.

**Additional information about the courses:**Program on Noncollegiate Sponsored Instruction, Office on Educational Credit and Credentials, American Council on Education, One Dupont Circle, Washington, D.C. 20036.

### Conventional Metal Removal (M2.1)

**Location:** Lynn, MA.

**Length:** 40 hours (10 weeks).

**Dates:** September 1978—Present.

**Objective:** To introduce basic conventional metal removal processes to supervisory and nontechnical professionals.

**Instruction:** Study of machinability theory, chip formation, cutting tool forces, and the machine tool applications. Discussion of machine speeds and feeds as applied to surface finish, tool life, power requirements, and parts integrity. Methodology includes lecture, demonstration, and audiovisual aids.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Manufacturing Engineering Technology; or in the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Industrial Management (12/78).

### Numerical Control (M2.2)

**Location:** Lynn, MA.

**Length:** 32 hours (8 weeks).

**Dates:** September 1978—Present.

**Objective:** To introduce supervisory and nontechnical professionals to numerical control as applied to machine tool processes.

**Instruction:** History of numerical control; programming; lathe specifications and tooling; tape coding; interactive graphics, computerized coordinate measuring machines. Methodology includes lecture, demonstration, and audiovisual aids.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Manufacturing Engineering Technology; or in the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Industrial Management (12/78).

### Electrical Discharge Machining (M2.3R)

**Location:** Lynn River Works, Lynn, MA.

**Length:** 20 hours (2 two-hour meetings for 10 weeks).

**Dates:** January 1979—Present.

**Objective:** To introduce the electrical discharge machining process to supervisory and nontechnical professionals.

**Instruction:** Covers electrical discharge machining principles as they relate to equipment operation, effects of process parameters on machined dimensions and surface characteristics, effects on metal removal rate and tool wear, selection of parameters for machining operations, process capability. Examples of typical tooling and machining operation, estimation of machining time, equipment and safety are covered in lecture and discussion.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Manufacturing Engineering Technology (4/80).

### Sheet Metal (M2.4)

**Location:** Lynn, MA.

**Length:** 38 hours (9½ weeks).

**Dates:** September 1978—Present.

**Objective:** To introduce supervisory personnel and nontechnical professionals to sheet metal manufacturing processes.

**Instruction:** Specifications; physical properties; testing; equipment; tools and dies; materials phenomena; sheet metal manufacturing processes. Methodology includes lecture, demonstration, and audio-visual aids.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Manufacturing Engineering Technology; or in the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Industrial Management (12/78).

## Joining (M2.5)

**Location:** Lynn, MA.

**Length:** 40 hours (10 weeks).

**Dates:** September 1978—Present.

**Objective:** To introduce supervisory and nontechnical professionals to joining techniques used in jet aircraft engines.

**Instruction:** Fixtures; fit and tolerances; operator requirements; equipment certification; inspection; typical operating problems associated with resistance welding; gas tungsten arc welding; brazing; electron beam welding as applied to aluminum, cobalt, nickel, titanium base alloys, and selected stainless steels. Methodology includes lecture, demonstration, and audio-visual aids.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Manufacturing Engineering Technology; or in the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Industrial Management (12/78).

## Miscellaneous Processes (M2.6)

**Location:** Lynn, MA.

**Length:** 30 hours (7½ weeks).

**Dates:** September 1978—Present.

**Objective:** To introduce supervisors and nontechnical professionals to several industrial processes.

**Instruction:** Heat treating, cleaning, shot peening, and thermal spraying of specialized materials used in turbines and jet aircraft engines. Methodology includes lecture, demonstration, and audio-visual aids.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Manufacturing Engineering Technology; or in the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Industrial Management (12/78).

## Quality Control (M2.7RF)

**Location:** Lynn River Works, Lynn, MA.

**Length:** 24 hours (2 two-hour meetings for 6 weeks).

**Dates:** March 1979—Present.

**Objective:** To acquaint supervisors and nontechnical personnel with quality control system, instrumentation, and procedures.

**Instruction:** Provides in-depth coverage of nondestructive testing as well as information on penetrant die techniques, ultrasonics, X-ray, gauging, and measurement. Also covers quality control functions as they relate to the total manufacturing process.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Industrial Management or Manufacturing Engineering Technology (4/80).

## Rotating Parts Seminar (M2.9R)

**Location:** Lynn River Works, Lynn, MA.

**Length:** 30 hours (2 two-hour meetings for 7.5 weeks).

**Dates:** April 1979—Present.

**Objective:** To introduce supervisory and nontechnical professionals to the processes and problem areas inherent in the manufacturing of rotating aircraft engine parts.

**Instruction:** Presents every step of the planning, production, and troubleshooting of typical jet engine rotating parts. A team project to develop a sample manufacturing plan is required.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Manufacturing Engineering Technology (4/80). PREREQUISITES: Conventional Metal Removal, Electrical Discharge Machining, Numerical Control, and Quality Control.

## Fabricated Parts Seminar (M2.10F)

**Location:** Lynn River Works, Lynn, MA.

**Length:** 24 hours (2 two-hour meetings for 6 weeks).

**Dates:** April 1979—Present.

**Objective:** To introduce supervisory and nontechnical professionals to problem areas and the integration of processes unique to the fabrication of aircraft engine sheet metal parts.

**Instruction:** Presents every step of the planning, production, and troubleshooting of fabricated parts. A team project to develop a sample manufacturing plan is required.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Manufacturing Engineering Technology (4/80). PREREQUISITES: Sheet Metal, Joining, and Quality Control.

## AIRCRAFT ENGINE BUSINESS GROUP–AFTER-HOURS COURSES

The course listed below is one of many opportunities available to Aircraft Engine Business Group employees of Lynn. It is offered at the close of the working day.

**Source of official student records:** Personnel Development Office, General Electric, Mail Drop 14508, 1000 Western Avenue, Lynn, Massachusetts 01910.

**Additional information about the course:** Program on Noncollegiate Sponsored Instruction, Office on Educational Credit and Credentials, American Council on Education, One Dupont Circle, Washington, D.C. 20036.

### High Temperature Metallurgy (M9)

**Location:** Lynn, MA.

**Length:** 40 hours (20 weeks); 1 two-hour meeting per week.

**Dates:** December 1968–Present.

**Objective:** To give engineers and supervisory personnel with engineering backgrounds an understanding of high temperature alloys and their application.

**Instruction:** Crystal structure of metals; equilibrium diagrams; strengthening mechanisms; properties of metals at elevated temperatures; creep rupture; fatigue; oxidation; corrosion; surface treatments; protective coatings with a special emphasis on superalloys. Methodology includes lecture, projects, and presentations.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Engineering or Metallurgy (12/78).

## APPRENTICESHIP TRAINING PROGRAM–LYNN RIVER WORKS

The courses that follow are conducted by the Apprenticeship Office of the Lynn Relations Operation. Three years of classroom training, in conjunction with three years of hands-on shop training, produces qualified machinists for the two GE businesses at the Lynn River Works:The Power Generation Group and the Aircraft Engine Group. Apprentice trainees are usually hired for this program, but selected employees may also be admitted.

**Source of official student records:** Manager-Apprentice Training, General Electric Company, Mail Drop 37717, 1100 Western Avenue, Lynn, Massachusetts 01910.

**Additional information about the courses:**Program on Noncollegiate Sponsored Instruction, Office on Educational Credit and Credentials, American Council on Education, One Dupont Circle, Washington, D.C. 20036.

### Applied Engineering Mechanics

**Location:** Lynn, MA.

**Length:** 54 hours (18 weeks).

**Dates:** December 1968–Present.

**Objective:** To provide a basic knowledge of statics and some dynamics as a foundation for more advanced courses in mechanics and strength of materials.

**Instruction:** Principles of statics; coplaner force systems; parallel force systems; friction; principles of dynamics; kinematics of rectilinear motion; variable acceleration; kinetics of rectilinear motion; systems of bodies in motion; hydraulics.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Manufacturing Engineering Technology (12/78).

### Blueprint I

**Location:** Lynn, MA.

**Length:** 54 hours (18 weeks).

**Dates:** December 1968–Present.

**Objective:** To introduce basic blueprint interpretation.

**Instruction:** Interpretation of industrial drawings, orthographic projection, line values, decimal dimensions, tolerances, rotated sections, sectioning, partial views, and baseline dimensioning. Methodology includes lecture and practical exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Manufacturing Engineering Technology (12/78).

### Blueprint II

**Location:** Lynn, MA.

**Length:** 54 hours (18 weeks).

**Dates:** December 1968–Present.

**Objective:** To provide a knowledge of advanced blueprint interpretation.

**Instruction:** Point-to-point dimensioning; representation of screw threads; classification of fits; thread symbols; auxiliary views; phantom outlines; structural steel shapes; finishes; sketching of objects by oblique; perspective; isometric methods; special sections; special methods of showing combined sections; auxiliary views; assembly drawings; combined assembly and detail drawings; pictorial assembly drawings; multiscale drawings; drawings with complex parts.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Manufacturing Engineering Technology (12/78).

### College Algebra

**Location:** Lynn, MA.

**Length:** 54 hours (18 weeks).

**Dates:** December 1968—Present.

**Objective:** To provide a working ability in algebra at college level.

**Instruction:** Sets theory; exponents in multiplications; products involving multinominals; division (exponents, involving multinominals); binominal products; factoring; complex fractions; laws of exponents; roots; radicals; linear equations; quadratic equations; complex numbers; functions; graphs of linear functions; elimination of a variable; determinants; ratio and proportion; variation; permutations; combinations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in College Algebra (12/78).

### Computer Science

**Location:** Lynn, MA.

**Length:** 27 hours (9 weeks).

**Dates:** December 1968—Present.

**Objective:** To provide an introduction to the operations of computers and programming in BASIC.

**Instruction:** History of computers; flow charting statements and sequences; input/output; arithmetic operations; alphanumerics; functions and subroutines; program writing in BASIC. Methodology includes lecture and demonstration.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Computer Technology and Programming (12/78).

### Fundamentals of Numerical Control

**Location:** Lynn, MA.

**Length:** 27 hours (9 weeks).

**Dates:** December 1968—Present.

**Objective:** To provide an introduction to the operation of a numerically controlled machine tool programming and tape punching.

**Instruction:** Numerical control value to manufacturing; engineering and management; numerical control cost; needs and accuracy; definitions; types of signals; types of input media and coding; methods of measuring and comparing input and feedback signals; numerical control history; types; similiarity and reliability; pros and cons of numerical control quality and tooling cost; basis for numerical control dimensioning; introduction to punched tape; word identification; auxiliary functions; incremental dimensioning; computer programming; input and output of APT programming; timesharing. Methodology includes lecture and demonstration.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Manufacturing Engineering Technology (12/78).

### Machine Shop Theory

**Location:** Lynn, MA.

**Length:** 54 hours (18 weeks).

**Dates:** December 1968—Present.

**Objective:** To provide the basics in machine shop technology.

**Instruction:** Safety, drilling; use of hand tools, lathes, millers, grinders, gear cutting, special machines, surface measurement and supportive skills such as precision measuring, lay out, heat treating, and metal testing. Methodology includes lecture, demonstration, and extensive practical exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Manufacturing Engineering Technology (12/78).

### Manufacturing Engineering

**Location:** Lynn, MA.

**Length:** 27 hours (9 weeks).

**Dates:** December 1968—Present.

**Objective:** To provide an overview of manufacturing engineering and its role in industry.

**Instruction:** Work measurement; product planning; facilities planning; OSHA; sampling; economic analysis. Methodology includes lecture, discussion, and term projects.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Manufacturing Engineering Technology (12/78).

### Measurements

**Location:** Lynn, MA.

**Length:** 27 hours (9 weeks).

**Dates:** December 1968—Present.

**Objective:** To develop skill and understanding of precision measurement and its history in related manufacturing.

**Instruction:** Study of a wide range of measuring instruments including micrometers, verniers, depth and height gauges, indicators, sine bars, and surface plate set-ups. Methodology includes lecture, audiovisual aids, demonstration, and extensive practical exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Manufacturing Engineering Technology (12/78).

### Metallugry

**Location:** Lynn, MA.

**Length:** 54 hours (18 weeks).

**Dates:** December 1968—Present.

**Objective:** To provide a broad introduction to metallurgy as a basis for more advanced materials engineering courses.

**Instruction:** Atomic arrangements; solidification; phase diagrams; precipitation hardening; ferrous heat treating operations; hot and cold working; corrosion studies. Methodology includes lecture, demonstration, and laboratory.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Manufacturing Engineering Technology (12/78).

### Quality Control

**Location:** Lynn, MA.

**Length:** 27 hours (9 weeks).

**Dates:** December 1968—Present.

**Objective:** To provide an overview of quality control and its application to industrial processes.

**Instruction:** Total quality control; quality policies; reproduction quality evaluation; cost of quality; conformance and product auditing; quality planning; statistical method of control; nondestructive testing. Methodology includes lecture and case studies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Manufacturing Engineering Technology (12/78).

### Strength of Materials

**Location:** Lynn, MA.

**Length:** 54 hours (18 weeks).

**Dates:** December 1968—Present.

**Objective:** To teach students how to make basic stress calculations for structure.

**Instruction:** Study of stresses and deformations involved in tension, compression, bending, torsion, and some combined stresses. Methodology includes lecture, demonstration, audio-visual aids, and practical training.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Manufacturing Engineering Technology (12/78).

### Technical Communications

**Location:** Lynn, MA.

**Length:** 27 hours (9 weeks).

**Dates:** December 1968—Present.

**Objective:** To develop the ability to communicate technical information effectively.

**Instruction:** Sentence structure and word usage emphasizing clarity and conciseness. A written report, oral presentations, and a term paper are required.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Technical Writing (12/78).

### Tool Design

**Location:** Lynn, MA.

**Length:** 54 hours (18 weeks).

**Dates:** December 1968—Present.

**Objective:** To provide a working knowledge of basic tool design.

**Instruction:** Cutting tools; locating fixtures; clamping methods; gauge design; single stage blanking and piercing dies; bending dies; plastic tools; design requirements of numerically controlled tooling. Methodology includes lecture, audio-visual aids, demonstration, and practical exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Manufacturing Engineering Technology (12/78).

### Trigonometry

**Location:** Lynn, MA.

**Length:** 54 hours (18 weeks).

**Dates:** December 1968—Present.

**Objective:** To provide the ability to perform calculations involving trigonometric functions and logarithms.

**Instruction:** Trigonometric functions; tables of trigonometric functions and solutions of right triangles; trigonometric identities; graphical presentation of the trigonometric functions; trigonometric equations and inverse functions; logarithms; oblique triangles; vectors and applications; complex numbers.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Trigonometry (12/78).

## MEDICAL EDUCATION PROGRAMS, MEDICAL SYSTEMS DIVISION

The Medical Systems Division, General Electric Company, manufactures and distributes equipment and provides services in the fields of radiology, computed tomography, nuclear medicine, ultrasound, monitoring, and dental radiography. The division headquarters, in Milwaukee, Wisconsin, is the center of educational activities.

Medical education programs are independent of the product line and are not involved with promotional activities or employee service training activities. The goal of the programs is to impart a large volume of information in a limited period of time. Students come from all areas of the medical field and have diverse backgrounds. Information that participants gain can be immediately applied in the clinical situation.

**Source of offical student records:** American Council on Education, Registry of Credit Recommendations, Office on Educational Credit and Credentials, American Council on Education, One Dupont Circle, Washington, D.C. 20036.

Additional information about the courses: Program on Noncollegiate Sponsored Instruction, Office on Educational Credit and Credentials, American Council on Education, One Dupont Circle, Washington, D.C. 20036.

### Advanced Concepts in Nuclear Medicine

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 41 hours (5 days).

**Dates:** August 1978—Present.

**Objective:** To present new and advanced technologies in nuclear medicine.

**Instruction:** Explains the dynamic vascular techniques used in organ evaluation.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Advanced Nuclear Medicine Techniques, and 1 semester hour in Techniques Seminar (8/79).

### Basics of Nuclear Medicine

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 91 hours (over 2 weeks).

**Dates:** February 1976—Present.

**Objective:** To impart the fundamental principles of nuclear medicine.

**Instruction:** A comprehensive program covering clinical hospital rotations, detector systems, equipment and health physics, history, mathematics, nuclear and atomic physics, quality control, radiation biology, radiation detectors, radiation units, radionuclide production, radiopharmaceuticals, regulatory control, and statistics of nuclear medicine. An introduction to computers, computerized tomography, nuclear dynamics, thermography, and radioimmunoassay ultrasound is included. A comprehensive classroom program of nuclear medicine including history, mathematics, nuclear and atomic physics, radiation units, radionuclide production, radiopharmaceuticals, quality control, radiation biology, regulatory control, radiation detectors, and health physics. An introduction to nuclear dynamics, computers, CT, ultrasound RIA, and thermography is also included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Introduction to Nuclear Medicine (8/79).

### Basics of Ultrasound

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 37 hours (5 days).

**Dates:** January 1979—Present.

**Objective:** To impart basic principles of ultrasound including wave theory, generation frequency, transduction, and measurement; selected clinical applications of ultrasound equipment.

**Instruction:** Basic principles of ultrasound. Students are instructed in clinical procedures indications, contraindications, and techniques.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, or in the upper division baccalaureate category, 1 semester hour in Biomedical Engineering, Electromechanical Laboratory, Principles of Ultrasound Equipment, or Applied Physics (sound) (8/79).

### Comprehensive Nuclear Medicine

**Location:** Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 30 hours (3 days).

**Dates:** November 1979—Present.

**Objective:** To cover the basic and advanced concepts of nuclear medicine.

**Instruction:** A didactic overview of nuclear medicine principles including health physics, instrumentation and procedures, mathematics, radiation biology, radiation physics, radioactive transmutation, units, radio pharmaceuticals.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Introduction to Nuclear Medicine (8/79).

### Computed Tomography Series
### Part 1: (Principles of Computed Tomography)
### Part 2: (Quality Assurance in Computed Tomography)
### Part 3: (Quality Control in Computed Tomography)

**Location:** Oconomowoc, WI.

**Length:** 1. 40 hours (5 days).
2. 24 hours (3 days).
3. 16 hours (2 days).

**Dates:** June 1979—Present.

**Objective:** To provide a fundamental understanding of principles of and quality control in computed tomography.

**Instruction:** Basic radiography and computers, emphasizing computed tomography equipment; quality control and quality assurance. Methodology includes audio-visual aids and limited laboratory observations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, or in the upper division baccalaureate category, 2 semester hours in Introduction to Radiography or electives in Advanced Radiographic Equipment. Part 1, when taken separately, 1 semester hour in Introduction to Radiography (8/79).

### Dynamics in Nuclear Medicine

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 30 hours (3 days).

**Dates:** September 1979—Present.

**Objective:** To present specific advanced techniques of dynamics including the equipment involved in these techniques.

**Instruction:** Advanced techniques in nuclear medicine including angiography, cerebral dynamics, cardiac imaging and function studies, perfusion studies. Instruction about principles of the equipment and computers involved in these procedures is included.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Nuclear Medicine Seminar or Project and 1 semester hour in Advanced Nuclear Medicine Techniques (8/79).

### Management Processes

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 48 hours (5 days).

**Dates:** October 1979—Present.

**Objective:** To teach participants to use management techniques that can be applied to the work environment in decision analysis and problem analysis.

**Instruction:** Focus on decision analysis, methods of handling complex situations, problem analysis, and supervisor and personnel problems. A combined lecture/discussion learning experience using the Kepner-Tregoe approach to problem solving.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Administration, Business, Health Administration, Hospital/Clinic Administration, Management, or Personnel Administration (8/79).

### Nuclear Cardiology

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 30 hours (3 days).

**Dates:** November 1979—Present.

**Objective:** To present principles and techniques of nuclear cardiology.

**Instruction:** Injection techniques; dynamic flow studies; cardiac ejection fractions and their use in evaluation of function; output; wall motion; other aspects of the cardiovascular system.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, or in the upper division baccalaureate category, 1 semester hour in Cardiovascular Physiology, or Cardiovascular Anatomy, or a practicum in Nuclear Medicine or Nuclear Cardiology (8/79).

### Nuclear Medicine Registration and Certification

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 45 hours (1 week).

**Dates:** August 1978—Present.

**Objective:** To cover the principles of nuclear medicine deemed essential for certified nuclear medicine technologists.

**Instruction:** An overview of the major principles in nuclear medicine emphasizing mathematical computations and their application to the field of nuclear medicine.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Medicine Mathematics, or Seminar in Nuclear Medicine (8/79).

### Principles of Cardiovascular Monitoring

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 38 hours (5 days).

**Dates:** October 1979—Present.

**Objective:** To provide an understanding of the basic physiology of the heart particularly as it relates to basic and advanced life support and cardiovascular monitoring.

**Instruction:** Principles of the cardiovascular system including the common abnormal functions as indicated by cardiovascular monitoring systems; the origin and sequence of the electrocardiogram with the physiological basis of the use of monitoring devices with the electrical impulse. Vascular pressures are discussed; principles of cardiovascular monitoring devices are developed and explored from the viewpoint of the monitoring specialist; includes instruction in basic electronic terminology, grounds, isolated circuits, leakage current, and basic mechanisms of monitoring. Lecture and discussion are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category and in the upper division baccalaureate category, 1 semester hour in Clinical Medicine, Emergency Medicine, First Aid, or Health Education (8/79).

## Quality Control and Compliance in Nuclear Medicine

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 30 hours (3 days).

**Dates:** October 1979—Present.

**Objective:** To explain the procedures necessary for compliance with professional and government agencies.

**Instruction:** Quality control as applied to radiopharmaceuticals, nuclear instrumentation, and nuclear procedures. Compliance techniques to meet and exceed the requirements of the Nuclear Regulatory Commission, Food and Drug Administration, Occupational Safety and Health Administration, and Joint Commission on Hospital Accreditation. Classroom lectures are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, and in the upper division baccalaureate category, 1 semester hour in Nuclear Medicine Quality Control and Compliance or 1 semester hour in Radiation Safety (8/79).

## Quality Control and Compliance in Ultrasound

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 30 hours (3 days).

**Dates:** October 1979—Present.

**Objective:** To introduce basic quality control techniques consistent with requirements of the Bureau of Medical Devices, Bureau of Radiologic Health, Joint Commission of Accrediting Hospitals, and National Electrical Manufacturers Association. Participants should be able to accurately analyze a quality control program.

**Instruction:** An overview of basic principles of ultrasound followed by detailed presentations on quality control and compliance. Designed for health professionals who have previous knowledge about optimum image quality. Program is three-day lecture course.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Principles of Ultrasound Equipment (8/79).

## (Radiological Series)
## 1. Introduction to Radiologic Techniques
## 2. Quality Assurance in Radiology
## 3. Radiology Registration and Certification
## 4. Standardization of Radiologic Techniques
## 5. Understanding X-Ray Generation

**Location:** Oconomowoc, WI.

**Length:** 1. 40 hours (5 days).
2. 40 hours (5 days).
3. 40 hours (5 days).
4. 24 hours (3 days).
5. 24 hours (3 days).

**Dates:** October 1979—Present.

**Objective:** To provide students with a coherent sequence of knowledge in the principles and procedures associated with the radiologic science area.

**Instruction: Course 1:** A basic introductory program of classroom instruction designed for a rapid coverage of the basic scientific principles of radiology. Electronics, health physics, physics, radiation biology, x-ray emissions and techniques; introduction to special physiological and social problems associated with this field. The student will complete courses in chemistry, human anatomy, mathematics, and physiology. **Course 2:** A classroom and laboratory program designed to instruct the theory and practice of quality assurance in radiology. Covers Department of Health, Education, and Welfare requirements and the techniques for compliance with quality assurance criteria. Participants will learn how to use their equipment to make meaningful measurements of filtration, KVP, MA, time, and tube alignments. Collimator specifications and compliance will be developed. **Course 3:** Classroom presentation designed for rapid instruction in basic principles of radiological sciences. Darkroom chemistry, instrumentation, health physics, mathematics, physics, radiation biology, radiation physics, techniques, and exposure factors will be covered. Instruction will help participant prepare for examinations in radiology; each participant must complete multiple choice examination questions covering each area of study. Computed tomography, nuclear medicine, radiation therapy, and ultrasound will be reviewed in this program. **Course 4:** A classroom presentation developing the procedure for departmental standardization of techniques. Covers the basic concepts affecting the machine's output. Participants develop procedures that will allow an analysis of technique factors and how they change. With this data, participants develop a uniform program for standardization as suggested by the Joint Commission of Accrediting Hospitals and the American College of Radiology. **Course 5:** A classroom didactic presentation designed for a comprehensive, up-to-date presentation of the principles of x-ray generation and their application. The generator, x-ray tube, controlling devices, and associated equipment, will be covered along with beam quality and quantity factors, pulse shape, three phases, types of targets and output-heat unit curves.

**Credit recommendation: Course 1:** In the lower division baccalaureate/associate degree category, 2 semester hours in Radiology Sciences. **Course 2:** In the lower division baccalaureate/associate degree category, 2 semester hours in Radiology Sciences. **Course 3:** In the lower division baccalaureate/associate degree category, no credit given. **Course 4:** In the lower division baccalaureate/associate degree category, 1 semester hour in Radiology Sciences. **Course 5:** In the lower division baccalaureate/ associate degree category, 1 semester hour in Radiology Sciences (8/79).

## Radiological Techniques in Dentistry

**Location:** Oconomowoc, WI; Omaha, NB; Jacksonville, FL; Hartford, CT; Las Vegas, NV.

**Length:** 30 hours (3 days).

**Dates:** September 1979—Present.

**Objective:** To cover the functional aspects of dental radiography.

**Instruction:** The principles of film processing and exposure techniques, health physics, radiation biology, and x-ray production will be covered with an emphasis on the use of dental radiographic systems. The participants will be instructed on the use of collimation, filtration, and technique factors of KV, MA, and time as they relate to problems associated with dental radiography. Contrast, distortion, exposure factors, latitude, magnification, minification, quality assurance, quality control, and resolution will also be covered. Equipment selection and film processing techniques for dental radiography, operation, registration, and shielding are analyzed.

**Credit recommendation:** In the lower division baccalaureate/associate degree category and in the upper division baccalaureate category, 1 semester hour in Dental Assisting and Dental Hygiene (8/79).

## Radioisotope Handlers

**Location:** Oconomowoc, WI; Jacksonville, FL; Hartford; CT; Las Vegas, NV.

**Length:** 30 hours (3 days).

**Dates:** April 1979—Present.

**Objective:** To provide the theoretical and practical knowledge necessary to respond to a variety of routine emergency radioisotope materials management situations in such a way as to comply with local and federal requirements.

**Instruction:** A comprehensive three-day program designed for individuals who work with or around radioisotope sources, as well as those who supervise operations in which radioisotopes are involved. Basic principles of mathematics, physics, radiation biology, radioisotope chemistry instrumentation, radiation protection, and emergency procedures. Radiation protection includes the practical aspects of regulations, protection standards, surveys for exposure and contamination, and the handling of sealed and unsealed sources. Participants must complete mock manipulation, wipe testing, and exposure surveys. Leak testing wipes or smears as well as techniques for measurement will be completed by each member of the class.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, or in the upper division baccalaureate category, 1 semester hour in Radiation Biology, Physics, Radiation Chemistry, Radiation Physics, or Radiation Safety (8/79).

# RESEARCH AND ENGINEERING PROFESSIONAL DEVELOPMENT PROGRAM

The courses listed below are part of the Research and Engineering Professional Development Program conducted by General Electric's Re-Entry and Environmental Systems Division (RESD) at its offices in Philadelphia and neighboring locations. The courses are offered to employees of the division and are supervised and taught by qualified staff of RESD. Included below are courses of the centrally administered General Electric Financial Management Program (FMP). These courses are highly intensive and selective in admissions.

**Source of official student records:** Technical Director, Professional Development and Education Program, General Electric Company, Re-Entry and Environmental Systems Division, 3198 Chestnut Street, Philadelphia, PA 19101. Financial Management Program Administration, Corporate Financial Manpower Operation, General Electric Company, 3135 Easton Turnpike, Mail Drop W2A, Fairfield, CT 06431.

**Additional information about the courses:** Program on Noncollegiate Sponsored Instruction, Office on Educational Credit and Credentials, American Council on Education, One Dupont Circle, Washington, D.C. 20036.

### Advanced Programming Techniques (C-235) (Advanced Computer Techniques)

**Location:** Philadelphia and Valley Forge, PA.

**Length:** 30 hours (15 weeks).

**Dates:** February 1977—Present.

**Objective:** To provide advanced instruction in the efficient use of hardware and software to students familiar with basic programming.

**Instruction:** Text editing; time sharing; media conversion; magnetic tape contrasted with disc files; plotting; computer costs. Lecture and computer problem-solving are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Computer Sciences (1/77).

### An Introduction to Finance (MT-202) (Survey of Accounting and Financial Techniques)

**Location:** Philadelphia, PA.

**Length:** 26 hours (13 weeks).

**Dates:** February 1977—Present.

**Objective:** To familiarize employees with the basic tools of accounting and financial management.

**Instruction:** Basic accounting theory; cost accounting concepts; cost control; federal and state taxation; cash flow; budgeting government contracts; information systems. Method includes lecture, classroom discussion, and exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Administration (1/77). NOTE: This recommendation applies to non-business curricula.

### Auditing (FMP-301)

**Location:** Philadelphia, PA.

**Length:** 26 hours (13 weeks).

**Dates:** January 1969—Present.

**Objective:** To enable participants to audit and evaluate accounting and management systems.

**Instruction:** Principles and practices of auditing as applied to cash, receivables, inventory, plant and equipment, liabilities, net worth, and operations. Includes review of internal control systems. Involves lecture, discussion, and homework projects.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting (1/77).

### Basic Electronics (EE-115)

**Location:** Philadelphia, PA.

**Length:** 24 hours (12 weeks).

**Dates:** September 1977—Present.

**Objective:** To provide students with a basic understanding of the laws of electricity and magnetism, and to prepare the student for a more detailed course in the fundamentals of circuit design.

**Instruction:** Physics associated with electrical technology; electrostatics and DC circuitry; electromagnetic effects; the theory of AC circuitry; application of electrical laws and principles. Includes detailed treatment of the functions and performance characteristics of common and state-of-the-art electronic devices. More advanced topics, such as noise, transient effects, and instrumentation, are introduced and explained. Methodology includes lecture and laboratory.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electronics (1/77). NOTE: Recommendation does not apply to science and engineering majors.

### Calculus I (AM-175)

**Location:** Philadelphia, PA.

**Length:** 30 hours (15 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide a standard first-semester calculus course that would be useful to technicians pursuing undergraduate degrees.

**Instruction:** Algebra; functions; limits; derivations; differentiation; application of the derivative; the definite integral; infinite limits and limits of sequences; exponential functions; logarithmic functions; trigonometric functions. Employs lecture and problem solving as homework and classwork.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Mathematics (1/77). NOTE: Recommendation does not apply to science and engineering majors.

### Calculus II (AM-275)

**Location:** Philadelphia, PA.

**Length:** 30 hours (15 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide a standard second-semester calculus course that would be useful to technicians pursuing undergraduate degrees.

**Instruction:** Inverse functions, finding antiderivatives; the definite integral; paths; infinite sequences and series; power series and polynominal approximation; vectors in the plane; functions of two variables. Employs lecture and problem solving as homework and classwork.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Mathematics (1/77). NOTE: Recommendation does not apply to science and engineering majors.

## College Math I (AM-172)
## College Math II (AM-272)

**Location:** Philadelphia, PA.
**Length: Version 1:** 30 hours (15 weeks).
**Version 2:** 45 hours (15 weeks).
**Dates: Version 1:** September 1975-April 1978.
**Version 2:** May 1978—Present.

**Objective:** To provide a basic college freshman math course that would be useful to technicians and others pursuing an undergraduate degree.

**Instruction: Version 1:** Set theory; logic; number theory; algebra; geometry; trigonometry (2 hours only); matrices; probability and statistics; introduction to calculus and statistics. Method includes lecture and classroom and homework problem solving. **Version 2:** Set theory; logic; number systems; algebra; probability; statistics; matrices; game theory; computer applications; trigonometry; polynomials; factoring; quadratic equations; irrational equations; logarithms; calculus. Method includes lecture and classroom and homework problem solving.

**Credit recommendation: Version 1:** In the lower division baccalaureate/ associate degree category, 3 semester hours in Mathematics (1/77). NOTE: Recommendation does not apply to science and engineering majors. **Version 2:** In the lower division baccalaureate/associate degree category, 6 semester hours in Mathematics (5/78). NOTE: Recommendation does not apply to science and engineering majors.

## Computer-aided Circuit Design and Analysis (EE-117)

**Location:** Philadelphia and Valley Forge, PA.
**Length:** 36 hours (12 weeks).
**Dates:** September 1975—Present.

**Objective:** To provide students with a working knowledge and understanding of the techniques of computer-aided circuit analysis.

**Instruction:** The response of semiconductors, integrated circuits, and discrete circuits to various frequency and time-varying stimuli are evaluated. Method for describing the behavior of active nonlinear elements to the computer are explained and compared. Comparison between expected theoretical analysis and computed results are made. Limited studies of optimization and sensitivity analysis are covered. Methodology includes lecture, discussion, and laboratory.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Electrical Engineering as a professional elective (1/77).

## Designing with Microprocessors (EE-213)

**Location:** Philadelphia, PA.
**Length:** 64 hours (16 weeks).
**Dates:** September 1974—Present.

**Objective:** To provide the participant with the fundamental theory of microcomputer architecture, the state-of-the-art of microprocessor hardware, and experience in programming for microprocessor usage so that the participant can design actual subsystems.

**Instruction:** Covers the theory and application of microprocessors in design. Data are provided on currently available hardware, and hands-on experience is provided on their use.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering (1/77).

## Effective Management Planning (MT-105)

**Location:** Philadelphia, PA.
**Length:** 26 hours (13 weeks).
**Dates:** February 1976—Present.

**Objective:** To provide planning within organizations in order to broaden participants' understanding of the planning function.

**Instruction:** Strategic, product, operational, program, engineering, and financial planning. Method includes lecture and case study. A history of the evolution of corporate planning and techniques for selling the plan are also included.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Management (1/77).

## Financial Accounting (FMP-102) (Advanced Financial Accounting)

**Location:** Philadelphia, PA.
**Length:** 24 hours (12 weeks).
**Dates:** January 1971—Present.

**Objective:** To train students to apply basic accounting theories and techniques to balance-sheet accounts, studies, and special accounting problems.

**Instruction:** All balance-sheet accounts; consolidated financial statements; foreign exchange accounting; fund flow/cash flow; federal, state and local taxes. Involves lecture, discussion, and homework projects.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting (1/77).

## Information Systems (FMP-302)

**Location:** Philadelphia, PA.
**Length:** 24 hours (12 weeks).
**Dates:** January 1969—Present.

**Objective:** To introduce planning and implementation of information systems from the management and business viewpoint.

**Instruction:** Designing, programming, developing, and managing computer-based data systems for business and financial operations. Method includes lecture, discussion, and case study.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Computer and Information Science (1/77).

### Introduction to Chemistry I (AC-181)

**Location:** Philadelphia and King of Prussia, PA.

**Length:** 60 hours (30 weeks).

**Dates:** September 1975—Present.

**Objective:** To provide students with an understanding of the basic concepts of chemistry and how these concepts relate to the materials and processes used in the aerospace industry.

**Instruction:** Atomic theory and structure of compounds; oxygen, oxidation, and combustion; gas laws-hydrogen; molecules and molecular weights; general classificaton of compounds; classification of the elements; structure of the atom and the theory of valence; water; carbon; solutions and colloids; halogens; alkali metals; ionization; chemical equilibrium; nitrogen and ammonia. Method includes lecture and discussion.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Chemistry (1/77). NOTE: Recommendation does not apply to science and engineering majors.

### Introduction to Chemistry II (AC-281)

**Location:** Philadelphia and King of Prussia, PA.

**Length:** 60 hours (30 weeks).

**Dates:** September 1975—Present.

**Objective:** To provide students with an understanding of the basic concepts of chemistry and how these concepts relate to the materials and processes used in the aerospace industry.

**Instruction:** The sulfur family; electrochemistry; organic chemistry; aliphatic hydrocarbons; olefins; free radicals; aromatic hydrocarbons; alcohols; phenols; ethers; halides; amines and derivatives; aldehydes; ketones; acids; polyfunctional compounds; organic polymers; carbohydrates; amino acids; peptides and proteins; biochemical reactions; biosynthesis; general biological reactions. Method includes lecture and discussion.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Chemistry (1/77). NOTE: Recommendation does not apply to science and engineering majors.

### Management Accounting (FMP-202)
### (Management Cost Accounting)

**Location:** Philadelphia, PA.

**Length:** 34 hours (17 weeks).

**Dates:** January 1971—Present.

**Objective:** To provide students with an understanding of cost accounting as a quantitative device for use by managers in selecting and researching objectives.

**Instruction:** General cost accounting concepts; job order costs; standard costs; process costs; direct costing and government contract costing. Involves lecture, discussion, and homework projects.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting (1/77).

### Materials Engineering I (ME-121)

**Location:** Valley Forge Space Center, Valley Forge, PA.

**Length:** 60 hours (30 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide students with an introduction to materials science.

**Instruction:** Principles underlying structure, properties, and behavior of engineering materials, including metals, ceramics, and polymers. Bonding; crystal structure; defect structure; alloying; mechanical, electronic and magnetic properties in relation to structure; phase equilibrium; phase transformation. Instruction is chiefly lecture.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering (1/77).

### Modern Structural Analysis I (ME-122)
### (Survey of Topics In Structural Analysis)

**Location:** Philadelphia and Valley Forge, PA.

**Length:** 60 hours (30 weeks).

**Dates:** September 1977—Present.

**Objective:** To provide design engineers with a survey of selected topics in structural analysis.

**Instruction:** Covers elastic analysis of indeterminate structures, using the finite element method. Provides an introduction to fracture mechanics and the analysis and design of composite materials. Lecture, discussion, and problem solving are employed.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Structural Engineering (1/77).

### Probability Theory for Engineering Applications (AM-174)
### (Probability Theory)

**Location:** Philadelphia, PA.

**Length:** 32 hours (16 weeks).

**Dates:** September 1977—Present.

**Objective:** To establish a foundation in mathematical probability theory.

**Instruction:** Basic mathematical probability theory with calculus; set theory as a basis for probability;

probability axioms; the concept of a random variable; distributions, density functions, moments and characteristic functions; conditional marginal and joint distributions; and functions of random variables. Lecture, discussion, and homework problems are used.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Mathematics (1/77).

### Supervisory Development and Organization Renewal Workshop (MT-2020)

**Location:** Philadelphia, PA.

**Length:** 45-50 hours (16 sessions).

**Dates:** September 1977—Present.

**Objective:** To broaden the experienced supervisor's understanding of human behavior and of his or her impact on others; to improve supervisory skills and ability to influence the organizational environment through planned problem-solving strategies; to give the supervisor a greater sense of participation in the management process.

**Instruction:** The course is divided into three major phases: theory, practices, and implementation and follow-up. Topics include motivation, transactional analysis, leadership styles, group dynamics, and problem solving. Students attend management training sessions and then apply their knowledge in identifying and solving problems in their work situations. Method emphasizes discussion and workshop.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Organizational Behavior/Management (1/77).

### Value Analysis (MT-104 or MT-204) (Value Engineering)

**Location:** Philadelphia and Valley Forge, PA.

**Length:** 40 hours (13 weeks).

**Dates:** February 1975—Present.

**Objective:** To familiarize managers with the analysis and solution of engineering and organizational problems through the systematic implementation of value engineering principles.

**Instruction:** History of Value Engineering/Value Analysis; job plan application; types of value; information phase; functional analysis; systems technique. Method includes lecture, discussion, and workshop.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Operations Management (1/77).

# GRUMMAN CORPORATION

The Grumman Corporation, which started on Long Island in 1930 as the Grumman Aircraft Engineering Corporation, is the parent company for a number of manufacturing and marketing subsidiaries. These companies produce many types of aircraft for the armed forces and for the commercial market, as well as spacecraft for the National Aeronautics and Space Administration. In addition, they provide a range of other services, including computer systems and computer-related products, environmental studies and mapping services, and the manufacture of commercial products in the automotive, marine, and recreational fields.

## GRUMMAN AEROSPACE CORPORATION

The Grumman Aerospace Corporation, located in Bethpage, Long Island, New York, is a wholly owned subsidiary of the Grumman Corporation. Grumman Aerospace designs, integrates, and produces major systems for both the military and space markets.

The Career Education and Development Center conducts a broad range of professional and management development courses for Grumman employees on Long Island and at other Grumman responsibility centers. Part of this effort is the Grumman Voluntary After-Hours Program which offers a comprehensive selection of job-related training courses.

Please note that the credit recommendations apply to *all* locations where the courses are offered.

Source of official student records: Director, Grumman Aerospace Corporation, Career Education and Development, Bethpage, New York 11714.

### 1. Aerospace Structures I (HH02030)
### 2. Aerospace Structures II (HH02031)

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 1. 60 hours (15 weeks).
2. 60 hours (15 weeks).

**Dates:** 1. September 1979—Present.
2. February 1980—Present.

**Objective:** To provide participants with a basic understanding of aircraft structural design and analysis from design criteria to final calculated margins of safety.

**Instruction: Course 1:** Design criteria; applied loads; material properties and processes; statically determinate and indeterminate structures; analysis of thick sections such as lugs and columns. **Course 2:** Buckling and crippling analysis of thin sections; unsymmetrical bending; single and multi-cell box beam analysis; fatigue and fracture analysis, including life prediction; post-buckled strength of flat stiffened sheet in shear; multiple sheet joint loads; introduction to shear lag; experimental stress analysis.

**Credit recommendation: Course 1:**In the graduate degree category, 3 semester hours in Aerospace Engineering. **Course 2:**In the graduate degree category, 3 semester hours in Aerospace Engineering (7/80). NOTE: A student must complete Course 1 successfully to be eligible to receive credit for Course 2.

### Administration of Government Contracts (HH02215)

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 30 hours (15 weeks).

**Dates:** July 1980—Present.

**Objective:** To enable participants to apply general principles of procurement and contract administration to U. S. government contracts.

**Instruction:** U. S. Department of Defense contracting policy and methodology; types of contracts; contract financing; quality control; warranties and product liability; patents and copyrights; data management.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Administration or a related field (7/80).

### Business and Technical Writing (FF 01545)

**(Formerly Writing and Communications [FF 01173])**

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 36 hours (16 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide the student with the basic philosophy and related mechanics of logical organization, effective writing, and efficient reading.

**Instruction:** Basic principles of communication; logical organization; effective writing; efficient reading; prescriptive writing; report writing; persuasive writing; material selection and punctuation. Course format includes lecture, discussion, and writing exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business or Engineering (8/76).

## Communication and Motivation (EE 01540)

**(Formerly Communication and Motivation |EE 01239|)**

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 36 hours (13 weeks).

**Dates:** January 1970–Present.

**Objective:** To provide the student with behavioral science approaches in the areas of motivation and communication.

**Instruction:** Behavioral science research and its implications for the management process; the impact of assumption; achievement motivation; interpersonal communication skill; management styles, both individual and corporate; job enrichment; the process of effective listening.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavioral Science (7/75).

## Computer Programming, COBOL (FF 01547)

**(Formerly Computer Programming, COBOL |FF 00001|)**

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 37½ hours (15 weeks).

**Dates:** January 1976–Present.

**Objective:** To teach the student how to design, code, and debug COBOL programs, and methods of solving data processing problems using COBOL.

**Instruction:** Review of data processing concepts. Computer programming with COBOL, with emphasis on the divisional makeup of the COBOL language; identification; environment; data; procedure.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Data Processing (2/76).

## Computer Programming, FORTRAN (FF 01548)

**(Formerly Computer Programming, FORTRAN |FF 00002|)**

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 36 hours (15 weeks).

**Dates:** January 1976–Present.

**Objective:** To provide the student with knowledge needed to express computational problems in FORTRAN language.

**Instruction:** Introduction to the digital computer and its basic programming concepts utilizing FORTRAN IV, logic, and flow charting; computer applications, limitations, and the functions of its major components. Use of structured problem solving.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Computer Programming (2/76).

## Computers: A Managerial Tool (FF 01549) (Management Information System)

**(Formerly Computers: A Managerial Tool |FF 01021|)**

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 36 hours (15 weeks).

**Dates:** January 1976–Present.

**Objective:** To provide the student with an understanding of information processing and computers as they relate to management, operational effectiveness, planning, and organizational change.

**Instruction:** General concepts and characteristics of the hardware and software components of information processing systems; processes and methodologies related to application development, system procurement, and management. Specific topics include: industry personnel and organization; hardware architecture; input/output devices; resource management; security; computer-aided design; financial modeling; current state-of-the-art and industry trends.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Management (2/76).

## Digital Signal Processing (HH02059)

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 42 hours (21 weeks).

**Dates:** February 1980–Present.

**Objective:** To provide participants with a working knowledge of the fundamental principles of Digital Signal Processing and the capability to apply these concepts to design situations.

**Instruction:** Review of complex variables and linear systems analysis; discrete-time signals and systems; review of difference equations; sampling; aliasing, and frequency response; the theory and application of the z-transform; the discrete Fourier transform, circular convolution, and applications to digital filtering; review of vector analysis and matrix theory; representation of linear digital networks, signal flow graph analysis, and parameter quantization effects; the theory and application of digital IIR and FIR filter design; theory and application of the fast Fourier transform (FFT) technique; new directions in digital signal processing.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Applied Mathematics or Electrical Engineering (7/80).

### Effective Oral Presentations (FF 01550)

**(Formerly Effective Technical Presentations [FF 00019])**

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 36 hours (18 weeks).

**Dates:** September 1976—Present.

**Objective:** To develop the participant's skill in communicating with and motivating an audience.

**Instruction:** Intellectual, physical, and emotional aspects of oral communication; organization for clarity, impact, and repeatability; motivating and persuading an audience for action; the use of audiovisual aids. To develop the ability to compose and deliver presentations with poise, self-confidence, and effectiveness, students make oral presentations which are evaluated by the class and the instructor.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Public Speaking (8/76).

### Effective Technical Presentations (FF 00019)

Refer to Effective Oral Presentations (FF 01550).

### Fundamentals of Supervisory Management (EE 01541)

**(Formerly Fundamentals of Supervisory Management [EE 00099])**

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 40 hours (16 weeks).

**Dates:** March 1967—Present.

**Objective:** To provide the student with a basic introduction to the management process and to develop understanding of the nature of leadership.

**Instruction:** Introduction to the nature of management; the process of planning, organizing, and controlling; fundamentals of personality and behavior; motivation and communications; handling complaints and grievances; guiding employees and building job satisfaction and morale.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Management (7/75).

### Integrated Circuits, Part II (FF 01572)

**Location:** Company classrooms, Bethpage High School, Bethpage, NY; other company locations throughout the United States.

**Length:** 37½ hours (15 weeks).

**Dates:** April 1976—Present.

**Objective:** To provide a thorough understanding of linear (analog) and digital circuits emphasizing combinatorial and sequential logic circuits.

**Instruction:** Historical background; review of the decimal number system; binary number system with concentration on conversion of various number systems such as binary to decimal and decimal to binary; various binary codes and conversion from any radix to radix 10; basic combinational logic (concentrating on truth tables, Karnaugh maps, and minimizing techniques); basic gates used in the build-up of combinational logic circuits and algebraic simplification methods; sequential logic; flip-flops and counters and their applications; registers and their applications. (Prerequisite: Introduction to Integrated Circuits FF 01571.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Electrical Engineering (12/77).

### Introduction to Computer Programming (FF 01546)

**(Formerly Introduction to Computer Programming [FF 00003])**

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 37½ hours (15 weeks).

**Dates:** January 1976—Present.

**Objective:** To provide students with knowledge of basic computer concepts and programming techniques prior to language courses.

**Instruction:** Basic concepts of processing data including: data representation and recording; computer equipment; how the computer is instructed to perform its task; how this tool can assist in problem solving and providing information. Various elements of computer program development: proper problem definition and planning to meet specific objectives; flow charting used to represent the analysis and logical operations necessary to solve the problem; graphic solution then translated into coded instructions in a pseudoprogramming language. Other topics include: record layout design; data organization; systems and program documentation; and operating systems concepts. Exercises and case studies are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Data Processing (2/76).

### Introduction to Integrated Circuits (FF 01571)

**Location:** Company classrooms, Bethpage High School, Bethpage, NY; other company locations throughout the United States.

**Length:** 37½ hours (15 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide a thorough understanding of hybrid ("h") parameters and the fabrication techniques of integrated circuit elements such as resistors, capacitors, diodes, and transistors.

**Instruction:** Review of Boolean algebra and DeMorgan's Laws; digital circuits analyzed from a DC as well as an AC point of view; various types of couplings with an emphasis on the practical aspect of each type; transistors found in integrated circuits (low and high frequency) and field effect transistors. The course consists of lectures, discussions, slides, and view-graphs.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Electrical Engineering (12/77).

## Introduction to Microprocessors (FF 01544)

**Location:** Company classrooms, Bethpage High School, Bethpage, NY; other company locations throughout the United States.

**Length:** 40 hours (16 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide the student with the knowledge necessary to operate a microcomputer, design microcomputer systems, and write, debug, and execute assembly language computer programs.

**Instruction:** Specific hardware and software aspects of the Motorola 6800 microprocessor; similarities between the machine and other general purpose microprocessors. The course includes classroom lectures, microcomputer laboratory sessions, and assigned homework exercises. (Prerequisites: Introduction to Integrated Circuits FF 01571 and Integrated Circuits, Part II FF 01572, or the equivalent knowledge.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Electrical Engineering (12/77).

## Management I (EE 01542)

**(Formerly Management I [EE 01351])**

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 48 hours (12 weeks).

**Dates:** March 1975—Present.

**Objective:** To improve the effectiveness of practicing first-line supervisors through increased knowledge of management practices and the behavioral sciences and their application on the job.

**Instruction:** Introduction to supervisory management practices; role of the supervisor, including motivation and performance appraisal; personnel and labor relations; the communication process; the manufacturing system, including quality and material control; budgeting. The works of Maslow, McGregor, and Herzberg are studied, and on-the-job applications are planned. Lecture, discussion, case studies, role-play exercises, and small group projects are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Management (7/75).

## Management II (EE 01376)

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 42 hours (10½ weeks).

**Dates:** April 1975—Present.

**Objective:** To increase the middle manager's knowledge in the areas of the behavioral sciences, business issues, and functional management in order to improve managerial performance.

**Instruction:** The manager's job; management of time; personnel and labor relations; planning and goal setting; theories of human effectiveness; management of manpower and material. Case studies and group exercises are used to develop a model of effective managerial performance.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Management (7/75).

## Managing for Productivity (EE 01931)

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 30 hours (12 weeks).

**Dates:** January 1979—Present.

**Objective:** To familiarize participants with the dynamics of human behavior in organizations, and to develop skills in applying management principles to increase productivity.

**Instruction:** Exercises and applications in motivation, perception and attitudes, group dynamics, participation and productivity, management by objectives, and achieving organizational effectiveness. Discussion of specific case studies.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Business Administration (7/80).

## Senior Management Development Program (EE 01252)

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 100 hours (12½ weeks).

**Dates:** April 1975—Present.

**Objective:** To increase the knowledge and competence of senior-level managers in human resource development and utilization, business policy, and the management process.

**Instruction:** The behavioral sciences and their effect on the management process; human resource utilization; business and social issues as they impact on industry and business policy; functional management; management information systems; manufacturing management. Emphasis is on the use of detailed case study analyses.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Behavioral Science and 3 semester hours in Management Process (7/75).

### Technical Publication Writing (HH 01976)

**Location:** Bethpage, NY; other company locations throughout the United States.

**Length:** 36 hours (9 weeks).

**Dates:** May 1979 – Present.

**Objective:** To instruct participants in the mechanics of preparing a manual from the initial stage of soliciting business to delivery of the final product to the customer.

**Instruction:** Types of technical publications; formats and contents of technical publications; collection of technical data; types, use, and construction of illustrations; manuscript generation; production and delivery.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Engineering Technology (7/80).

### Writing and Communications (FF 01173)

Refer to Business and Technical Writing (FF 01545).

## GRUMMAN DATA SYSTEMS INSTITUTE

The Grumman Data Systems Institute is the educational arm of CallData Systems, Inc. CallData is a nationwide multiservice subsidiary of Grumman Data Systems Corporation providing computing systems and services with associated training and education. In addition, the Corporation develops and markets computer-related products for government, business, and industry.

The Institute offers professional training in data processing for individuals in entry-level positions in the field. The Institute also provides this training for computer professionals who wish to keep up-to-date. The courses are available to employees of the Corporation as well as to the general public.

Source of official student records: Office of Financial Aid, Grumman Data Systems Institute, 280 Crossways Park Drive, Woodbury, New York 11797.

### Accounting (GIACA01)
### (Accounting I-II)

**Location:** 415 Crossways Park Drive, Woodbury, NY.

**Length:** 200 hours (14 or 28 weeks).

**Dates:** September 1979 – Present.

**Objective:** To provide the student with a theoretical and practical understanding of the complete accounting process of a business information system.

**Instruction:** Basic financial statements; setting up accounts; trial balance and worksheet; closing the books; cash receipts and disbursements journal; banking procedures; special journals; accounts receivable and payable ledger; depreciation and adjustments; classified statements; payroll; taxes; accruals; commercial paper; departmentalized accounting; partnership accounting; branch accounting; corporation accounting; manufacturing and cost accounting principles; statement analysis; data processing applications to an accounting system.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Accounting (8/81).

### ANS COBOL (GICPCO1)

**Location:** 280 Crossways Park Drive, Woodbury, NY.

**Length:** 120 hours (4 or 10 weeks).

**Dates:** October 1975 – Present.

**Objective:** To provide the student with basic concepts of COBOL programming and the ability to code simple programs.

**Instruction:** Introductory ANS COBOL programming; sequential, ISAM, and direct file processing; debugging; table handling; SORT and string statements. Students write and execute several programs. (Prerequisite: Fundamentals of Electronic Data Processing.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 6 semester hours in Electronic Data Processing (12/77).

### Assembly Language (GICPAO1)

**Location:** 280 Crossways Park Drive, Woodbury, NY.

**Length:** 90 hours (3 or 7½ weeks).

**Dates:** October 1975 – Present.

**Objective:** To enable the student to code programs in IBM/360/370 Assembly Language.

**Instruction:** Introduction to Assembly Language; Assembly Language programming, including floating-point and decimal arithmetic and macros. Students write and execute programs. (Prerequisite: Fundamentals of Electronic Data Processing.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 6 semester hours in Computer Science or Electronic Data Processing (12/77).

### Business Mathematics (GIACBM1)

**Location:** 415 Crossways Park Drive, Woodbury, NY.

**Length:** 30 hours (2½ or 3½ weeks).

**Dates:** September 1979—Present.

**Objective:** To provide the student with knowledge of the fundamentals of applied business mathematics.

**Instruction:** Emphasis is placed on learning mathematical concepts through practical applications in business situations as follows: bank records; sales records; percentage applications to cash and trade discounts; commission and mark-up; payroll; finance charges; inventory; depreciation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Mathematics (8/81).

### Customer Contact and Service (GIPACC1)

**Location:** 280 Crossways Park Drive, Woodbury, NY.

**Length:** 40 hours (1½ or 3½ weeks).

**Dates:** August 1976—May 1978.

**Objective:** To provide the student with a basic introduction to the supervisory process and to develop understanding of the nature of leadership.

**Instruction:** Introduction to the nature of supervision; the process of planning, organizing, and controlling; fundamentals of personality and behavior; motivation and communications; handling complaints and grievances; guiding employees and building job satisfaction and morale; personnel problems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Supervision (12/77).

### FORTRAN (GICPF01)

**Location:** 280 Crossways Park Drive, Woodbury, NY.

**Length:** 60 hours (2 or 5 weeks).

**Dates:** February 1970—Present.

**Objective:** To provide the student with basic concepts of FORTRAN programming and the ability to code programs.

**Instruction:** FORTRAN: syntax; expressions; assignments; control; input/output; format and subprograms. Students write and execute programs. (Prerequisite:Fundamentals of Electronic Data Processing.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Computer Science or Electronic Data Processing (12/77).

### Fundamentals of Electronic Data Processing (GICPB01)

**Location:** 280 Crossways Park Drive, Woodbury, NY.

**Length:** 40 hours (1½ or 3½ weeks).

**Dates:** October 1975—Present.

**Objective:** To provide the student with a basic understanding of computers and their use as a prerequisite to pursuing more specific computer application courses.

**Instruction:** Introduction to concepts of computer hardware and software; data representation; stored program concepts. The course contains no practical computer programming experience.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Data Processing (12/77).

### Introduction to Electronic Data Processing (GIPAB)

**Location:** 280 Crossways Park Drive, Woodbury, NY.

**Length:** 90 hours (3 or 7½ weeks).

**Dates:** August 1976—May 1978.

**Objective:** To provide a basic understanding of computers and their use for the nonprogramming data processing individual as a prerequisite to pursuing more specific computer application courses.

**Instruction:** Introduction to concepts of computer hardware and software; data representation; stored program concepts. The course contains no practical programming experience.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Data Processing if completed with one of the programming courses: (ANS COBOL, Assembly Language, FORTRAN, or Report Program Generator) (12/77).

### Operating Systems Concepts/Job Control Language (GICPJ01)

**Location:** 280 Crossways Park Drive, Woodbury, NY.

**Length:** 90 hours (3 or 7½ weeks).

**Dates:** October 1975—Present.

**Objective:** To provide the student with the ability to communicate with the IBM Operating System (OS) via Job Control Language (JCL) and commonly used utilities.

**Instruction:** The seven JCL statements; cataloged procedures; OS utilities (IEBGENER, IEBPTPCH, IEBUPDTE, IEBCOPY, and IEHMOVE). Students write and execute programs. (Prerequisites: Fundamentals of Electronic Data Processing and one programming language.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in

Computer Science or Electronic Data Processing (12/77).

### Report Program Generator (RPG) (GICPR01)

**Location:** 280 Crossways Park Drive, Woodbury, NY.
**Length:** 60 hours (2 or 5 weeks).
**Dates:** October 1975—Present.

**Objective:** To provide the student with basic concepts of Report Program Generator (RPG) programming and the ability to code simple programs.

**Instruction:** RPG programming cycle; input specifications; operation codes; special operation codes; output specifications. Students write and execute programs. (Prerequisite: Fundamentals of Electronic Data Processing.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Electronic Data Processing (12/77).

### Systems Analysis (GISAS99)

**Location:** 280 Crossways Park Drive, Woodbury, NY.
**Length:** 195 hours (17 weeks).
**Dates:** August 1977—Present.

**Objective:** To develop the initial skills necessary to conduct a systems study for commercial applications within the framework established by a phased approach to systems analysis and design.

**Instruction:** The course consists of various modules associated with the development of a systems study. A case study approach is used to develop skills. Problem definition; fact gathering; interviewing techniques; data organization; fact analysis techniques; input/output design; presentation techniques; system implementation; test development procedures; system follow-up. (Prerequisites: ANS COBOL and Fundamentals of Electronic Data Processing.)

**Credit recommendation:** In the upper division baccalaureate category, 6 semester hours in Electronic Data Processing; or in the graduate degree category, 3 semester hours in Electronic Data Processing (12/77).

# HOTEL ASSOCIATION OF NEW YORK CITY, INC. NEW YORK HOTEL AND MOTEL TRADES COUNCIL, AFL-CIO

The Hotel Association of New York and the New York Hotel and Motel Trades Council, AFL-CIO, established the Industry Training Program in 1969 under the terms of the citywide contract for hotel and motel employees. The program is financed by employer contributions. The aim of the program is to improve the skills and competencies of the industry employees and to increase their opportunities for promotion.

The program offers courses in Basic Education and English as a Second Language as a foundation for more specialized courses in hotel technology and food services administration, which reflect the departmental functions of modern hotels. All courses are offered on a schedule that is flexible enough to accommodate hotel employees regardless of the shifts they work.

Source of official student records: Administrator, Industry Training Program, 707 Eighth Avenue, New York, New York 10036.

## The Art of Cooking I (ITP C.I)

**Location:** 707 Eighth Avenue, New York, NY.

**Length:** 504 hours (36 weeks).

**Dates:** September 1974—June 1979.

**Objective:** To provide the student with a knowledge and application of the basic principles of food preparation in quantity.

**Instruction:** Basic cooking skills, such as: the preparation and cooking of all vegetables; knife drill and vegetable cut; basic stocks; basic sauces and smaller derived sauces; various thickening agents; the art of sauteing, roasting, broiling, poaching, and deep frying; popular desserts.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Commercial Cooking (12/76).

## The Art of Cooking II (ITP C.II)

**Location:** 707 Eighth Avenue, New York, NY.

**Length:** 504 hours (36 weeks).

**Dates:** September 1975—June 1979.

**Objective:** To provide the student with a knowledge of, and skills in preparing, professional quality foods in quantity.

**Instruction:** Designing, setting up, and decorating meat and fish platters in chaud froid and aspic for presentation and service; advanced instruction in more classical entrees; basic baking techniques; techniques and uses of pastillage, royal icing, almond paste, and ice carving.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Commercial Cooking (12/76).

## Basic Accounting (ITP 300A)

**Location:** 707 Eighth Avenue, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** September 1971—Present.

**Objective:** To provide the student with a basic knowledge of accounting principles and procedures.

**Instruction:** Theory of debits and credits; recording business transactions in debit and credit form; function and use of T accounts; posting to T accounts; preparation for balance sheets; profit and loss; bank reconciliation (long and short form); computation of interest and discount. (Prerequisites: Front Office Introduction ITP 100 and Front Office Operations ITP 200.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (12/76).

## English as a Second Language

1. ESL 101, 102 & 103
2. ESL 204, 205 & 206
3. ESL 307, 308 & 309
4. ESL 410, 411 & 412
5. ESL 513, 514 & 515
6. ESL 616, 617 & 618

**Location:** 707 Eighth Avenue, New York, NY.

**Length:** Each course, 108 hours (36 weeks); consists of three 12-week trimesters beginning in September and ending in June.

**Dates:** 1. June 1971—Present.
2. September 1972—Present.
3. September 1973—Present.
4-6. September 1974—Present.

**Objective:** To provide instruction in English at six levels, ranging from fundamental skills in listening, speaking, reading, and writing to advanced instruction in these areas.

**Instruction:** The program is based on a progression from simple to more complex grammatical structure which is integrated with the teaching of listening, speaking, and reading skills, the development of functional vocabulary, and the teaching of composition.

Students are placed in the level of instruction appropriate to their knowledge of English as demonstrated by performance on placement and achievement tests.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in English as a Second Language for each 200 hours of instruction that are successfully completed, up to a maximum of 3 semester hours for completion of all six levels (12/76).

### Food and Beverage Control (ITP 204)

**Location:** 707 Eighth Avenue, New York, NY.
**Length:** 30 hours (15 weeks).
**Dates:** May 1977—Present.

**Objective:** To provide students with the basic understanding and skills of cost control as used in food service management.

**Instruction:** Relationship of food and labor costs to selling prices; cost control procedures for receiving, storing, issuing, and inventory; portion and menu costing; butcher's test; beverage and inventory control procedures; daily and monthly reports and adjustments. (Prerequisite: Stewarding ITP 104.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Food Services Administration (5/77).

### 1. Front Office Introduction (ITP 100)

**(Formerly Front Office I)**

### 2. Front Office Operations (ITP 200)

**(Formerly Advanced Front Office)**

**Location:** 707 Eighth Avenue, New York, NY.
**Length:** 1. 30 hours (15 weeks).
2. 30 hours (15 weeks).
**Dates:** 1. September 1971—Present.
2. September 1974—Present.

**Objective:** To provide the student with a basic understanding of front office operations in a hotel.

**Instruction:** Study of the responsibilities and duties of all front office personnel including day room clerk, night desk, reservations clerk, mail and information personnel, front office manager, and assistant manager.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Hotel Technology (12/76). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Front Office Operations (ITP 200)

Refer to Front Office Introduction (ITP 100).

### Fundamentals of Air Conditioning and Refrigeration

**Location:** 707 Eighth Avenue, New York, NY.
**Length:** 30 hours (15 weeks); 300 hours of independent study.
**Dates:** January 1973—Present.

**Objective:** To develop skills sufficient for entry-level work in servicing refrigeration units and air conditioners.

**Instruction:** Analysis and repair of heating and air-conditioning systems, including installation, controls, refrigerants, and motors.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Fundamentals of Heating, Ventilation, and Air Conditioning Technology (7/78).

### 1. Machine Operations (ITP 200A)

**(Formerly N.C.R. Operation)**

### 2. Night Auditing (ITP 300)

**(Formerly N.C.R.—Night Auditing)**

**Location:** 707 Eighth Avenue, New York, NY.
**Length:** 1. 30 hours (15 weeks).
2. 30 hours (15 weeks).
**Dates:** September 1971—Present.

**Objective:** To provide the student with the skills necessary to master front office posting machines and to conduct a night audit in a hotel.

**Instruction:** Posting of charges and credits, corrections, cash keys of paid and paid out with the utilization of the various front office cashier forms. Field experience includes working the night auditor's evening shift with training on such posting machines as the N.C.R. 2000 and N.C.R. 4200. Lecture, discussion and field experiences. (Prerequisites: Front Office Introduction ITP 100 and Front Office Operations ITP 200.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Hotel Technology (12/76). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Night Auditing (ITP 300)

Refer to Machine Operations (ITP 200A).

### Payroll and Payroll Taxes (ITP 300B)

**Location:** 707 Eighth Avenue, New York, NY.
**Length:** 30 hours (15 weeks).
**Dates:** September 1974—Present.

**Objective:** To provide the student with a basic understanding of the procedures for payroll construction and reporting methods.

**Instruction:** Preparation of payrolls; posting to earning cards; preparing payroll and tax reconciliation reports in order to file quarterly and yearly payroll tax returns to Federal, State, and city agencies. (Prerequisites: Front Office Introduction ITP 100, Front Office Operations ITP 200, and Basic Accounting ITP 300A, or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Accounting (12/76).

## Repair and Maintenance I (ITP 105)

**Location:** 707 Eighth Avenue, New York, NY.

**Length:** 30 hours (15 weeks); 200 hours of independent study.

**Dates:** September 1972—Present.

**Objective:** To provide the student with a knowledge of the functions and responsibilites of a hotel's repairs and maintenance department under the direction of a licensed supervisor.

**Instruction:** Analysis of the mechanical core functions of the total hotel property. Heat; light; power; communications; kitchen and laundry equipment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Maintenance and Engineering for Lodging and Food Service (12/76).

## Stewarding (ITP 104)

**Location:** 707 Eighth Avenue, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1975—Present.

**Objective:** To provide the student with an understanding and application of the principles and techniques of stewarding.

**Instruction:** Purchasing specifications; receiving; storage procedures; sanitation; recordkeeping; working relationships with food and beverage department, executive chef, and/or food and beverage director.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Hotel Technology (12/76).

## 1. Typing I (ITP 103)
## 2. Typing II (ITP 203)

**Location:** 707 Eighth Avenue, New York, NY.

**Length:** 1. 60 hours (15 weeks).
2. 84 hours (21 weeks).

**Dates:** February 1971—Present.

**Objective:** To introduce the student to typewriting theory and techniques and to develop his/her typing speed to 30 w.p.m. (with a five error cut-off on a five-minute timing).

**Instruction: Course 1:** Mechanical functions of the typewriter; mastery of the keyboard; setting margins; centering typed material; short business letters; handling correspondence. **Course 2:** Tabulations; one-page reports; punctuation; envelopes; post cards; invoices; average-length business letters; term papers. Timed copy tests are used throughout both courses to measure accuracy and speed.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Science (5/77). NOTE:Both courses must be completed to receive credit.

## 1. Typing III (ITP 303)
## 2. Typing IV (ITP 403)

**Location:** 707 Eighth Avenue, New York, NY.

**Length:** 1. 60 hours (15 weeks).
2. 84 hours (21 weeks).

**Dates:** February 1971—Present.

**Objective:** To increase the student's typing speed to a minimum of 45-50 w.p.m. (with a five error cut-off on a five-minute timing).

**Instruction: Course 1:** Refresher skill drills, tabulation, and report problems; review of business letters and business forms; rough draft tables; statements of accounts. **Course 2:** Control reinforcement drills; manuscripts; business reports; special letter styles; tables of contents; balance sheets; financial statements. Both courses include speed development drills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Science (5/77). NOTE: Both courses must be completed to receive credit.

# HUTCHINGS PSYCHIATRIC CENTER

Hutchings Psychiatric Center, a unit of the New York State Office of Mental Health, provides comprehensive care to persons exhibiting moderate to severe mental health problems. Persons of all ages from the counties of Cayuga, Cortland, Madison, Onondaga, and Oswego are served by the facility.

The Education and Training Department offers a range of educational programs to staff from both the Center and community agencies. Courses are also open to other persons on a limited basis.

Source of official student records: Director of Education and Training, Hutchings Psychiatric Center, Post Office Box 27, Syracuse, New York 13210.

## Death and Dying

**Location:** Hutchings Psychiatric Center, Syracuse, NY.

**Length:** 15 hours (5 weeks).

**Dates:** December 1978—Present.

**Objective:** To provide participants with an understanding of the psychological, social, and practical aspects of death and dying.

**Instruction:** Meanings of death and immortality; children's concepts of death; Kübler-Ross's five stages of death realization; grief; funerals; ethical issues relating to death and dying.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Education, Humanities, Nursing Science, or Social Sciences (10/79).

## The Theories of Erik H. Erikson

**Location:** Hutchings Psychiatric Center, Syracuse, NY.

**Length:** Periodic conferences with independent study director (15 weeks).

**Dates:** October 1979—Present.

**Objective:** To provide participants with knowledge of Erikson's theories, emphasizing the psychohistorical relationship between the structure of his theories and his life experiences.

**Instruction:** Independent study. Comparing Erikson's theories with other psychoanalytic theories of development; applying Erikson's theories to his life as well as to the student's own development.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Human Development, Psychology, Social Work, Sociology, or Special Education (10/79).

# INTERNATIONAL CENTER OF PHOTOGRAPHY

The International Center of Photography (ICP) is New York City's only museum devoted exclusively to photography. It is a nonprofit organization established in 1974 by the International Fund for Concerned Photography, Inc. ICP is dedicated to the appreciation of photography as the most important art/communication form of the 20th century with the capacity to provide images of man and his world that are both works of art and moments in history. ICP offers a unique program of education, exhibition, information, publications, and archival facilities.

The many aspects of ICP's educational program include darkroom workshops, vision and craft workshops, a series of lectures by contemporary photographers, and an internship program. Interviews are conducted and portfolios are reviewed by ICP staff to place students in workshops and courses commensurate with their abilities and interests.

Source of official student records: Education Director, International Center of Photography, 1130 Fifth Avenue, New York, New York 10028.

## Advanced Black-and-White Printing

Refer to the Master Print.

## Advanced Color

### (Formerly Explorations in Color Perception and Printing)

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** October 1977—June 1981.

**Objective:** To explore some of the modern directions, techniques, and ideas of color imagery; to experiment with image and hue manipulation techniques of color printing; to analyze the work of contemporary and past practitioners in the field; to keep abreast of color photographic materials; to apply these concepts to personal photographic projects.

**Instruction:** Nomenclature for criticism; color perception (human vs. film); archival-keeping properties of color materials; history of color photography; analysis of contemporary artistic trends; synthetic color and color in mixed media; modification of color chemistry; printing from unmasked negatives; emulsion manipulation of Polaroid materials; color solarization. Discussions, demonstrations, and darkroom work allow students to experiment with different developers, temperature controls, and various techniques to achieve special effects with color. Students undertake their own color print processing. Following the 10 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisites: Introduction to Color Photography or equivalent, Introduction to Color Printing or equivalent, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

## Advanced Independent Study

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** Independent study.

**Dates:** October 1977—June 1981.

**Objective:** To provide and opportunity for concentrated, independent study and/or experience with professionals in a specialized field.

**Instruction:** A student's project is selected with the approval of ICP staff and is completed under the supervision of a working professional in the student's areas of interest. Projects involve students in the many cultural, community, educational, and commercial activities of the New York metropolitan area. Examples of independent study projects include: apprenticeship in exhibition and curatorial activities at ICP; research projects on trends, influence of, or activities of contemporary and historical photographers; teaching photography to young children at museums and community centers; critical papers involving topics and lecturers in ICP's lecture, dialogue and/or interchange series; and apprenticeships to noted commercial photographers or photo-journalists. (Prerequisite: advanced level of work as indicated by interview with portfolio, or undergraduate background in art history or other appropriate discipline, or equivalent experience.)

**Credit recommendation:** Arrangements for awarding credit should be made on an individual basis by students with their academic institutions prior to undertaking the course. The amount and level of credit to be awarded will depend on the nature of each student's project (9/77).

## Advanced Seminar

Refer to Individual Projects at an Advanced Level.

## Advanced Weekend Workshop

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 20 hours (4 days); 2 nonconsecutive weekends plus a lengthy assignment completed between sessions.

**Dates:** October 1977—June 1981.

**Objective:** To provide the serious photographer with the opportunity to develop and refine skill in specific artistic, professional, and technical aspects of photography.

**Instruction:** Outstanding contemporary photographers and artists work with students to expand their perceptions and strengthen their professional direction through demonstrations, technical guidance, assignments, and critiques. Some topics and instructors include: still life and illustration (Dick Frank), book art (Marcia Resnick), color workshop (Marie Cosindas), natural science photography (Robert Sisson), Xerography-photography and the color copier (Jill Lynne), the fine photographic print (Joseph Saltzer), bridging commercial success and personal vision (Burk Uzzle), travel photography (Michael Edelson), and the freelance photographer (John and Marjorie Morris). (Prerequisite: advanced level of work as indicated by interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 1½ semester hours in Photography (9/77).

## Alternatives to the Silver Image—Blueprint, Van Dyke, and Gum Bichromate Processes

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length.** 30 hours (10 weeks).

**Dates:** February 1980—Present

**Objective:** To introduce the student to various nonsilver and other hand-applied processes, and their historical and contemporary applications by artists.

**Instruction:** Historical evaluation of cyanotype, Van Dyke, and gum bichromate, and their contemporary aesthetic applications. Mixing and preparing chemicals; hand-sensitizing of fine arts papers, including coating and sizing; the making of Kodalith negatives and positives to be used for contact printing. Each student will choose one of the processes for indepth exploration, with emphasis on the effective melding of the selected process with a visual statement. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Photography (5/80).

## Assignment: Anywhere

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To provide in-the-field photographic experience in a variety of locations and situations under the guidance of a professional photographer.

**Instruction:** Camera handling techniques; creative exposure; indoor and outdoor lighting; materials and choice of equipment; problem solving in the field (poor lighting, uncooperative people, physical barriers, weather, and personal prejudicies); color vs. black-and-white; sensitivity and awareness; photographing people in their environment. Students process their own film and prints outside of class. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

## Audiovisual Production

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** October 1979—Present.

**Objective:** To enable the student to produce a basic audiovisual program.

**Instruction:** Organization and script; visuals (equipment, plotting the storyboard, shooting on location and in a studio, computer graphics); sound (equipment, recording techniques, the sound library, editing and transcribing raw tape); final production (editing, sequencing, timing, final mixing and mastering process); projection equipment. Students participate in the production of either their own or a group audiovisual program. (Prerequisite: Photography IV or equivalent, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Film, Photography, or Visual Communications; if a student completes an independent study project, 1 additional semester hour is recommended (5/80).

## Basic Color Printing (Type R and Cibachrome)

Refer to Introduction to Color Printing.

## Careers: The Picture Researcher

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** February 1979—Present.

**Objective:** To provide the student with an understanding of the scope of the picture research business by introducing basic methods and tools of professional picture research.

**Instruction:** Tools of a professional picture researcher; functions of photographs and other pictures; photographs on the screen; types of pictures; sources of pictures; dealing with photographers and photo agencies; care of photographs; budget management; legal and illegal use of photographs; free-lancing. Guest lecturers from a variety of fields discuss how the work of the picture researcher relates to theirs.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Photography (5/80).

### Contemporary Photography – An Investigation into Current Trends

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** February 1979 – Present.

**Objective:** To develop the student's understanding of the contemporary issues of photography, and to help the student establish critical standards for the evaluation of bodies of work.

**Instruction:** The meaning of a body of work; what constitutes originality; influence of public taste; power of photographic establishments in determining trends. Close attention is paid to the analysis of various movements which have influenced current directions in photography. Guest lecturers include photographers, critics, and designers. The facilities and resources of several New York City galleries are made available to class members.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (5/80).

### Editorial Concepts in Photography

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977 – June 1981.

**Objective:** To enable the student to acquire skills in, and understanding of, the specialized demands of editorial concept and subject matter required to communicate photographically through books, magazines, and newspapers.

**Instruction:** Analysis of assignments and goals; evaluation of audience; overview of classic and contemporary photojournalism; development of objectives; self-evaluation of photographs; criteria for "interesting" images; analysis of contact sheets; isolation of subject matter. Students process their own film and prints outside of class. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: advanced level of work as indicated by an interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

### Elements of Perception

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977 – June 1981.

**Objective:** To expand the student's perception through an understanding of the aesthetic and technical aspects of creating strong, personal photographs.

**Instruction:** Composition; point-of-view perspective; abstract imagery; formal and informal portraiture; landscape and cityscape; introductory concepts of zone system method of exposure control; creative use of lenses and filters. Students process their own film and prints outside of class. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: Photography IV or the equivalent, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

### The Essay As Personal Statement

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977 – June 1981.

**Objective:** To awaken an awareness of, and provide experience in, the application of multiple photographs in sequences, series, and essays as the vehicle for communicating a personal and/or social statement.

**Instruction:** Definitive exploration of "The Essay"; communication of personal concerns; incorporation of other media with still photographs; visual connections; sequences and series; the essay as a social document; the biographical and autobiographical essay. Students process their own film and prints outside of class. Following 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the upper divison baccalaureate category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

### Experimental Printing Processes, Part I

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** October 1977—June 1981.

**Objective:** To enable the student to explore the aesthetics and use of light-sensitive photographic materials and alternative printing techniques.

**Instruction:** History of experimental processes and related aesthetic thought; Kodalith as a foundation material; experimental work with Kodalith: tone line, posterization, Sabattier effect; photomontage; multiple printing; color key; photo silk screen. In all cases, the effect of the process on the visual statement will be analyzed. Emphasis is on the transformation of the conventional photographic image for an expanded use of the medium. Students set up, test, and explore a number of light-sensitive materials outside of class. (Prerequisite:Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the upper divison baccalaureate category, 2 semester hours in Photography (9/77).

### Experimental Printing Processes, Part II

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** October 1977—June 1981.

**Objective:** To continue the exploration of the new aesthetics and transformations of conventional photographic images by alternative printing techniques (primarily nonsilver) begun in Part I.

**Instruction:** Review of Kodalith techniques; Rockland Photo-E-Mulsion; Blue Print Papers; Cyanotype; Gum Bichromate, Kwik-Proof, Xerography, and Argenta Photo Linen. In all cases, the effect of the process on the visual statement will be analyzed. Students set up, test, and explore a number of light-sensitive materials outside of class. (Prerequisite: Experimental Printing Processes, Part I or the equivalent, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography (9/77).

### Explorations in Color Perception and Printing

Refer to Advanced Color.

### Expressive Black-and-White Printing

**(Formerly Interpretive Black-and-White Printing)**

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** February 1979—Present.

**Objective:** To enhance the student's understanding of black-and-white printing techniques; to refine the student's ability to produce fine prints; to raise the student's standards of critiquing his or her work and that of others.

**Instruction:** Exposure of negatives; variable development of films; double-bath development of prints; comparison of papers available; printing choices involving size, surface, framing, color, toning, and presentation of final work. All techniques discussed emphasize archival processing methods. Capacity for growth and creative initiative is considered throughout the course along with the student's ability to handle the technical material covered. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Photography (5/80).

### A History of Photography: From the Caves to the Present

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** October 1979—Present.

**Objective:** To provide the student with a fundamental knowledge of the history of photography, its evolutionary impact on the present, and its relation to art, sociology, literature, technology, and communication.

**Instruction:** Theory and history of picturemaking; artistic and critical context for the invention of photography; aspects of the medium of photography; the vernacular image (relations of snapshots, journalism, advertising, and postcards to both popular and artistic usage); recent directions in the art of photography, and their historical origins (extended document, metaphor and equivalence, relations with other media). A final research project is required. (Prerequisite:Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes an independent study project, 1 additional semester hour is recommended (5/80).

### Individual Projects at an Advanced Level

**(Formerly Advanced Seminar)**

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** February 1979—Present.

**Objective:** To clarify and intensify the advanced student's individual photographic vision, and stimulate his or her creative energies.

**Instruction:** Major directions and rationale; points of view; varied formats and their effects on the image; form and content; relationship of photography to other art forms; technical data on cameras, developing and printing techniques, and materials. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Photography; if a student completes an independent study project, 1 additional semester hour is recommended (5/80).

### Intermediate Black-and-White Photography, Part I

Refer to Photography III.

### Intermediate Black-and-White Photography, Part II

Refer to Photography IV.

### Interpretive Black-and-White Printing

Refer to Expressive Black-and-White Printing.

### Introduction to Black-and-White Photography, Part I

Refer to Photography I.

### Introduction to Black-and-White Photograhy, Part II

Refer to Photography II.

### Introduction to Color Photography

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To provide an introduction to, and practical experience in, the aesthetics and technical considerations of color photography through specific photographic assignments.

**Instruction:** "Seeing" in color; impact of color on the viewer; film types and film choice; lighting considerations and color balance; color as an aspect of image strength; filters for color films; exposure considerations; color perception: film vs. human; color processing and color printing. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: Photography II or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

### Introduction to Color Printing

**(Formerly Basic Color Print [Type R and Cibachrome])**

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates: October 1977—June 1981.**

**Objective:** To provide instruction and practical experience in the production of color prints from color transparencies; to teach criteria for the selection of originals for reversal color processing; to permit the student to experiment with the creative controls available in the color printing process.

**Instruction:** Characteristics of color reversal printing papers; color printing equipment; reversal color printing chemistry and processing equipment; corrective filtration; creative controls; contrast control through masking; print finishing. (Prerequisites: Photography IV, Introduction to Color Photography or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Photography (9/77).

### Introduction to Large Format Photography

**(Formerly Large Format Photography)**

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** October 1978—Present.

**Objective:** To develop in the student a technical facility in the use of the large format camera, an aesthetic appreciation of its value, and an enhanced knowledge of the visual disciplines.

**Instruction:** Quality control potential of large format cameras; space and time considerations; defining and utilizing specific controls (swings, tilts, types of large format cameras, lenses and covering power); film types; developers and developing choices; printing the large format negative; relationship between photographer and subject; aesthetic considerations. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Photography; if a student completes an independent study project, 1 additional semester hour is recommended (5/80).

### Introduction to Studio Photography

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** December 1979—Present.

**Objective:** To introduce the student to large-format studio work with table top, still life, and portraiture.

**Instruction:** This basic course in studio photography explores the capacity of light to create and destroy form. Students are introduced to the 4x5 view camera to study specific problems of table top, still life, and portraiture, with emphasis on control of light, color, filtration, and special techniques. Each student compiles an illustrated notebook of his or her own studio work. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Photography (5/80.)

## Landscape, Still Life, Interiors

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** February 1980—Present.

**Objective:** To develop the advanced student's ability to render landscape, still life, and interiors in black-and-white, with emphasis on larger formats.

**Instruction:** Aesthetics of fine art photography; the optimum negative and the zone system; view camera technique and special properties of lenses; types of lighting and effects of filtration; special problems with landscape, still life, and interiors. Course format includes field trips, with demonstrations by the instructor. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes an independent study project, 1 additional semester hour is recommended (5/80).

## Large Format Photography

Refer to Introduction to Large Format Photography.

## The Master Print

**(Formerly Advanced Black-and-White Printing)**

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** October 1977—June 1981.

**Objective:** To provide an opportunity for the study and development of fine printmaking techniques as a necessary craft and aesthetic in the creation and presentation of expressive photographs.

**Instruction:** Objectives of fine printing: tonal dynamics/aesthetic aims; zone system method of exposure; special compensating developers; developing by inspection; interpretative printing: choice of paper, print size, tonality, and contrast; specialized paper developers and their application; enlarging problems, and techniques; effects of bleaching and toning (selenium/gold chloride); preparation of the print for presentation and exhibition; exhibit techniques (physical and aesthetic, lighting, hanging, and equipment/materials). Emphasis is on archival considerations. Students process their own film and prints outside of class. (Prerequisite: advanced level of work as indicated by interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography (9/77).

## More Than One—Related Imagery

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 120 hours (15 weeks).

**Dates:** September 1979—Present.

**Objective:** To develop the student's understanding of how the juxtaposition and ordering of images creates new dimensions of visual experience.

**Instruction:** Formal and thematic relations resulting from various combinations of images; sequences which describe how to do something, which tell a story, which challenge ordinary experiences of time and space. Class meetings take the alternating forms of critiques of projects and lecture/discussion of other artists working in related formats.

**Credit recommendation:** In the upper division baccalaureate category, 6 semester hours in Photography (5/80).

## Photographers on Photography—Applying the Masters for One's Own

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To increase control and awareness of all aspects of the student's own photography through careful analysis and emulation of the technique, vision, and emotional impact of selected masters of photography.

**Instruction:** Use of light; tonal qualities; analysis of style and subject matter; copying the masters of landscape, architecture, pictorial, portraiture, and advertising photography to broaden students' style and vision. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: advanced level of work as indicated by interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

## Photographing People

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ (11 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To present, discuss, and explore the unlimited possibilities and special problems that arise when photographing strangers; to benefit from the experiences of the masters of that genre; to learn to deal with the psychological and social reactions that people have when they are the subject of a photograph.

**Instruction:** Visual and social sensitivity; use of the environment; candid photography; informal portraiture; dealing with strangers; press photography and photo-journalism; technical tools for, and problems of, lighting for candid and informal work (emphasis on flash); photographic essays of people. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

## Photography I

**(Formerly Introduction to Black-and-White Photography, Part I)**

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** October 1977—June 1981.

**Objective:** To provide an introduction to the basic tools and creative techniques of black-and-white photography through specific photograhic assignments.

**Instruction:** Film developing; printmaking; darkroom chemistry and procedures; camera and lens function; creative controls; composition; film and paper characteristics; exposure; dealing with subjects and subject matter; developing visual sensitivity. Text used: *Photography* by Barbara Upton & John Upton. Students develop their own film outside of class.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Photography (9/77).

## Photography II

**(Formerly Introduction to Black-and-White Photography, Part II)**

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** October 1977—June 1981.

**Objective:** To continue the exploration of skills and ideas introduced in Part I through specific photographic assignments.

**Instruction:** Basic technical review; creative controls in the camera; creative manipulation in the darkroom; "light" as subject matter; candid photography; tripod photography; the concept and application of filters; lenses; photographic concepts of "motion"; print finishing. Students develop their own film outside of class. (Prerequisite: Photography I or equivalent, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Photography (9/77).

## Photography III

**(Formerly Intermediate Black-and-White Photography, Part I)**

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** October 1977—June 1981.

**Objective:** To enable the student to refine his or her camera technique and darkroom skills, develop higher standards of self-criticism and working methods, and explore more difficult technical material, with increasing emphasis on aesthetics and creative content.

**Instruction:** Basic technical review; creative interpretative printing; techniques of flash; close-up photography; self-portraiture; characteristics of films and papers; sequential picture taking; candid and posed portraits; print finishing; light as medium; exposure to the world of contemporary photographers. Students develop their own film outside of class. (Prerequisite: Photography II or equivalent, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Photography (9/77).

## Photography IV

**(Formerly Intermediate Black-and-White Photography, Part II)**

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** October 1977—June 1981.

**Objective:** To continue the general development of the techniques, skills, and creative aspects of photography to a level where students can begin to have consistent success and show reasonable competence as a photographer; to introduce advanced subject matter and material for the exploration of new photographic areas.

**Instruction:** Advanced interpretative printing; "concerned" photography; the extended visual statement; photographic books; photocopying; unconventional printing processes; artificial lighting; conceptual photography; exhibition quality printing and finishing; portfolio development. Emphasis is on development of personal direction and style through self-designed projects and extensive evaluations. Students develop their own film and do additional printing outside of class. (Prerequisite: Photography III or equivalent, and interview with portfolio.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Photography (9/77).

## Photography, Aesthetics, and Criticism

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** February 1980—Present.

**Objective:** To develop the student's descriptive, analytical, and judgmental skills in photographic criticism.

**Instruction:** Survey of traditional problems and theories in western art history from classical times to the present. Concepts taken from the readings are applied to photographic works, and new photographic concepts are introduced, when appropriate, from recent photographic literature. Course format includes lecture, discussion, slide presentations, and gallery visits. Each student prepares a presentation on the work and ideas of another photographer.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes an independent study project, 1 additional semester hour is recommended (5/80).

## Photography and Books

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To develop an understanding of the ways in which photography can be used in books to communicate ideas and concepts, to convey facts, or to evoke feelings.

**Instruction:** Photographic books (successes and failures); books with words; the function of the publisher; published photographers; work patterns, formulas, and experiences; writer and photoresearcher (views of the industry); technical aspects (editing, design, layout, typography, and color process vs. black-and-white printing). Guest lecturers include book designers and editors. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: advanced level of work as indicated by interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

## The Professional Photographer

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 30 hours (11 weeks).

**Dates:** January 1981—Present.

**Objective:** To introduce the student to various ways of making a living as a professional photographer; to make the student aware of the best of professional photography; to give the student practical experience in completing assignments on varied subjects; to inform the student about appropriate business practices for professional photographers.

**Instruction:** Definition of the professional photographer; survey of various ways to earn a living, and markets available (from staff to free-lance, and from studio to news photography); varied forms of portrait photography; product photography and still life; elements of design; natural and artificial lighting, including strobe; architecture, interiors, and real estate ads; illustration, editorial photography, news and events, and the picture essay; business practices, ethics, labs, copyright laws, and rates; editing work from contact sheets and prints; assembling and presenting a portfolio. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Photography (5/80).

## Social Dilemma/Public Awareness

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To produce visual materials for social agencies and to assist them in furthering public awareness of a social problem; to give unseasoned photographers firsthand experience in job assignments that could run the gamut of covering an event, doing stories, audiovisuals, etc., and to give professional working people (social workers, guidance workers, teachers, etc.) who have photographic skills the opportunity to use photography with their work.

**Instruction:** Exploring methods of social research; historical, ethical, and social considerations for photographers undertaking such a project; correlating an agency's needs with talents; encountering sensitive situations and proceeding forward; producing audiovisuals for presentations; technical information concerning bad light conditions; collaborating for a final presentation and exhibit. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: Photography IV or the equivalent, and professional or educational experience in a related social field.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

### The Studio as Palette: Fashion and Portrait Photography

**Location:** Barbara Bordnick Studio, 39 East 19th Street, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** February 1979—Present

**Objective:** To broaden the advanced student's concept of fashion photography, to relate fashion photography as an extension of portraiture; to help the student understand the fashion approach to the task of problem solving.

**Instruction:** Studio lighting and equipment; beauty, fashion and portrait lighting; various categories of fashion photography (editorial, advertising, catalog); 8x10 Polaroid portrait technique. Students practice in actual studio situations with professional equipment and models. (Prerequisite: Photography IV or equivalent experience, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes an independent study project, 1 additional semester hour is recommended (5/80).

### Subject as Artifact—Image as Reality

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To expand the student's conception of objective and subjective awareness by building a philosophical base for viewing and making images, drawing upon other visual resources in making statements, and developing an intimate relationship between the student and his or her photographic work.

**Instruction:** Exploring the "light" of the image; what makes an image "live"; using self as artifact; exploring family albums; what documentation attempts to do; relationships of images; investigating the consciousness via book/diary, notes, contacts, and so forth; exploring the myth and truth of images. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: Intermediate Black-and-White Photography, Part II or the equivalent.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

### Teachers' Workshop—Photography as an Educational Tool

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To provide information to teachers of all subject specialties concerning availability and use of visual resources, to instruct and provide practical experience in the techniques for production of slides simple films, slide/tape programs, and other visual media; to explore young students' use of photography and related fields of self-development, social awareness, and data recording purposes.

**Instruction:** Assessing need; planning a storyboard; producing slides and overhead transparencies; simple slide/tape shows; student and teacher use of Polaroid and super-8 materials; sources of professionally produced visual and audiovisual materials; visual perception and visual defects; evaluation of programs. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: Classroom teaching experience and interview.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Photography or Teacher Education; if a student completes the independent study project, 1 additional semester hour is recommended (9/77).

### Urban Imagery

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977—June 1981.

**Objective:** To inspire and stimulate the student to a fresh consideration of the city as a source of visual vitality; to learn to technically and aesthetically deal with the specific character and problems particular to the subject matter.

**Instruction:** Documenting the forces of time and change; seeing above and below eye level; techniques of dealing with divisions and barriers; fragmentation: isolating subtle details; geometries: parallax problems; space (personal interpretations); surreal manipulation of reality; light and its effect on shape, depth, and texture. Following the 11 weeks of classroom instruction and assignments, students may elect to complete an independent study project under the supervision of the instructor. (Prerequisite: Photography IV or the equivalent, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes the independent study project, 1 additional semester hour in recommended (9/77).

## Vision and Culture

**Location:** International Center of Photography, 1130 Fifth Avenue, New York, NY.

**Length:** 33 hours (11 weeks).

**Dates:** October 1977—Present.

**Objective:** To examine photography as a medium for personal expression and as a major cultural phenomenon.

**Instruction:** This course examines photography as a medium for personal expression, and as a major cultural phenomenon and influence on our perceptions of the world around us. Several field trips actively engage students in picture taking, enabling them to explore together questions of subject choice, aesthetic approaches, personal confrontation, and considerations of space and time. Through weekly assignments, critiques, discussions, and exposure to the work of other photographers, students attempt to integrate their own concerns with a heightened sense of the medium's scope and potential.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography; if a student completes an independent study project, 1 additional semester hour is recommended (5/80).

## The Zone System for All Formats

**Location:** ICP, 1130 Fifth Avenue, New York, NY.

**Length:** 27½ hours (11 weeks).

**Dates:** September 1977–June 1981.

**Objective:** To teach the techniques, discuss the applications, and provide experience in the zone system of photography.

**Instruction:** Perception of tone; translation of tone from human vision to final print; films, chemistry, and papers for zone system application; measurement of light; calibration of materials and equipment; sensitometry as it pertains to the zone system; print presentation; Polaroid materials for the zone system. (Prerequisite: Photography IV or the equivalent, and interview with portfolio.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Photography (9/77).

# INTERNATIONAL CLAIM ASSOCIATION

The International Claim Association (ICA) is an association of health, accident, and life insurance companies operating primarily in the United States and Canada. The purposes of ICA include promoting high standards of performance in claims administration and providing a forum for research, education, and the exchange of ideas relating to various aspects of claims administration.

## ICA CLAIMS PROGRAM

The ICA Claims Education Program is designed to provide an introduction to life or health insurance and a thorough understanding of claims administration in the life, individual health, and group areas. The program is divided into two courses of study: Course I—Principles of Life (or Health) Insurance and Course II—Life and Health Insurance Claims. The program consists of five parts in all, and a specific examination is given for each part. Only the three parts making up Course II were submitted for review. The program was developed by ICA in cooperation with the Life Office Management Association (LOMA) and is administered by LOMA's Life Management Institute.

Source of official student records: Registrar, Life Management Institute, Life Office Management Association, 100 Colony Square, Atlanta, Georgia 30361.

### Claim Administration (C3)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA on behalf of the ICA.

**Length:** Independent study.

**Dates:** January 1967—Present.

**Objective:** To acquaint the student with the approaches to handling various insurance claim situations and with the administration of the claims department.

**Instruction:** Approaches to handling all types of claims presented under life, health, and group insurance contracts. Life settlement options and major medical insurance; conduct of investigations, rehabilitation, antiduplication, Federal insurance programs, and tax matters; claims department organization, philosophy, functions, and cost control; special characteristics of Canadian business.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Claims Administration (1/76).

### Life and Health Insurance Law (C2)

**(Formerly Life and Health Insurance Law [C1])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA on behalf of the ICA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To provide the student with an understanding of contract law as it affects life, health, and group insurance.

**Instruction:** Principles of contract law applied to individual and group life and health insurance. Insurable interest; policy holder and beneficiary rights; policy provisions; regulation and taxation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business Law or Life and Health Insurance (1/76).

### Medical and Dental Aspects of Claims (C1)

**(Formerly Medical Aspects of Claims [C2])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA on behalf of the ICA.

**Length:** Independent study.

**Dates:** January 1966—Present.

**Objective:** To provide the claim examiner with knowledge of human anatomy and disease needed to evaluate life and health insurance claims.

**Instruction:** Introduction to anatomy, physiology, and disorders of the body systems and of the oral cavity and associated structures; dental corrective procedures; basic medical and dental terminology.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in the Life Sciences (introductory), Medical Terminology, or Pathophysiology (introductory) (1/76).

### Medical Aspects of Claims (C2)

Refer to Medical and Dental Aspects of Claims (C1).

# JOINT APPRENTICE COMMITTEE OF THE ELECTRICAL INDUSTRY LOCAL UNION 3

The Joint Apprentice Committee of the Electrical Industry, Local Union 3, trains young men and women to become journeymen electricians. These inside wiremen are responsible for the installation of all types of electrical systems in residential, commercial, and industrial buildings throughout the New York City area.

Formal training classes for apprentices were first begun by Local 3 in 1921. In 1943 the training program was registered with the New York State Department of Labor wherein the New York State Education Department mandated that the apprentices attend 144 hours of classroom instruction each year. Today apprentices at Local 3 attend the minimum of 144 hours per year plus an additional three hours per week toward an associate degree in labor studies.

Source of official student records: Director, Apprentice Training, Joint Industry Board of the Electrical Industry, 158-11 Jewel Avenue, Flushing, New York 11365.

## Electrical Installation and Practice

**Location:** Charles Evans Hughes High School, 351 West 18th Street, New York, NY.

**Length: Part 1:** 4 years; includes 576 hours of classroom instruction and a minimum of 7,000 hours of on-the-job training.
**Part 2:** 1 year; includes 144 hours of classroom instruction supplemented by a minimum of 1,600 hours of field experience.

**Dates: Part 1:** September 1966—June 1979.
**Part 2:** September 1970—June 1981.

**Objective: Part 1:** To provide apprentices with the knowledge and skills needed to qualify them as journeymen electricians. **Part 2:** To provide journeymen electricians with additional knowledge and skills.

**Instruction: Part 1: Classroom**—Applied mathematics; basic DC and AC (including 3-phase) circuits; blueprint reading; principles of transformers, motors, and generators; motor controls; basic electronics and power supplies; safety considerations; standard trade practices; New York City electrical code. Lectures and demonstrations are used. **On-the-Job-Training**—Development of skills in the use of hand tools; instruction and practice in the installation of signal wiring systems; residential, commercial, and industrial wiring for light and power; installation and maintenance of transformers, motors, generators, and controls. **Part 2:** High voltage installation and electrical safety; electrical estimates; estimating practices; residential estimating; feeder and distribution estimating practices; other trade coordination; blueprint reading (architectural, electrical, steel erection, elevations, and details). Code requirements related to: busway installations; losses; grounding and landing; temporary power supplies; installation of light and power; rotating machinery (DC and AC); switchboards and fixtures; elevators; heavy equipment; high tension, air conditioning, and lighting systems. Lectures and demonstrations are used.

**Credit recommendation: Part 1:** In the lower division baccalaureate/associate degree category, 32 semester hours in Electrical Construction (16 lecture, 16 shop) (6/79). **Part 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Blueprint Reading and Sketching and 2 semester hours in High Voltage Installation and Electrical Safety, and in the upper division baccalaureate category, 3 semester hours in Estimating and Labor Productivity (6/79).

# KINGS COUNTY HOSPITAL CENTER SCHOOL OF ANESTHESIA FOR NURSES

Kings County is one of the largest hospitals in the country, with a bed capacity of 1,400. The facility encompasses 15 buildings spread over a 43-acre site.

The Department of Anesthesiology at Kings County Hospital Center, affiliated with Downstate Medical Center, offers a program in anesthesia for nurses through its School of Anesthesia. The program meets the requirements of the Council of Accreditation of Educational Programs in Nurse Anesthesia and qualifies the graduate to sit for the certification examination for nurse anesthetists. The program provides the student with preparation in all specialized areas of anesthesia. All graduates receive a certificate on completion of the program of 24 months. For successful completion of the program, the student must meet both didactic and clinical requirements.

The faculty consists of anesthesiologists, certified registered nurse anesthetists, and Ph.D.'s dedicated to the teaching of this specialty. The faculty and the facility offer the student the opportunity to develop skills in the administration of general and regional techniques giving special consideration to anesthesia for open heart surgery and neurosurgery. Research facilities are available to the student during the second year of the program. The student also has access to the library of Downstate Medical School, as well as the libraries of the Anesthesia Department and the School of Anesthesia

Source of official student records: Director's Office, Kings County Hospital Center—School of Anesthesia for Nurses, 451 Clarkson Avenue, Brooklyn, New York 11203.

## 1. Anatomy, Physiology, and Pathophysiology I
## 2. Anatomy, Physiology, and Pathophysiology II

**Location:** Kings County Hospital Center—School of Anesthesia for Nurses, 451 Clarkson Avenue, Brooklyn, NY.

**Length:** 1. 60 hours (20 weeks).
2. 60 hours (20 weeks).

**Dates:** 1. September 1980—Present.
2. January 1981—Present.

**Objective:** To provide the student with advanced knowledge of the structure, function, and disease processes of the human body as applied to intensive health care.

**Instruction:** Anatomy, physiology, and pathophysiology in relation to the cell, circulatory, respiratory, nervous, endocrine, and excretory systems.

**Credit recommendation:** In the graduate degree category, 8 semester hours in Physiology (7/81). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Basic Chemistry

**Location:** Kings County Hospital Center—School of Anesthesia for Nurses, 451 Clarkson Avenue, Brooklyn, NY.

**Length:** 45 hours (17 weeks).

**Dates:** January 1981—Present.

**Objective:** To provide the student with an introduction to chemistry.

**Instruction:** Atomic theory; molecular theory; formulas and radicals; electrolytic solution; acid-base theory; organic and inorganic chemistry; biological chemistry.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Chemistry (7/81).

## Clinical Practicum

**Location:** Kings County Hospital Center—School of Anesthesia for Nurses, 451 Clarkson Avenue, Brooklyn, NY.

**Length:** Minimum of 800 hours (2 years).

**Dates:** December 1979—Present.

**Objective:** To provide appropriate clinical experience necessary for the student to be able to apply concepts, skills, and knowledge effectively in both anesthesia and intensive care practice.

**Instruction:** Experience in patient assessment, selection and administration of anesthetics, and perioperative management. Anesthetics are administered to a wide variety of patients, including those requiring obstetric, pediatric, neurosurgical, and cardiac anesthesia. Close supervision, with immediate availability of consultation, leading to independent practice.

**Credit recommendation:** In the graduate degree category, 8 semester hours in Clinical Laboratory (7/81). NOTE: This clinical practicum is an appropriate substitute for a graduate-level internship experience.

### 1. Introduction to Anesthesia
### 2. Principles of Anesthesia Practice I (Introduction to Anesthesia Practice)

**Location:** Kings County Hospital Center—School of Anesthesia for Nurses, 451 Clarkson Avenue, Brooklyn, NY.

**Length:** 1. 60 hours (7 weeks).
2. 60 hours (20 weeks).

**Dates:** 1. November 1979—Present.
2. January 1981—Present.

**Objective:** To provide the student with an overview of the fundamental methods and procedures of anesthesia.

**Instruction:** Monitoring related to anesthesia; preoperative preparation and assessment; principles and techniques of airway management; principles and techniques of inhalation, intravenous, and regional anesthesia; use of muscle relaxants; introduction to anesthetic patient management.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Allied Health Sciences or Fundamentals of Anesthesia (7/81). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Pharmacology I

**Location:** Kings County Hospital Center—School of Anesthesia for Nurses, 451 Clarkson Avenue, Brooklyn, NY.

**Length:** 60 hours (20 weeks).

**Dates:** December 1979—Present.

**Objective:** To provide the student with an indepth understanding of the principles of drug effects, the treatment of drugs by the body, and the biologic activity of anesthetics.

**Instruction:** Mode of action of drugs; drug-receptor interactions; pharmacokinetics; biotransformation; enzyme induction; pharmacogenetics; safety and effectiveness. Details of the effects of general and local anesthetics.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Pharmacology (7/81).

### Pharmacology II

**Location:** Kings County Hospital Center—School of Anesthesia for Nurses, 451 Clarkson Avenue, Brooklyn, NY.

**Length:** 60 hours (20 weeks).

**Dates:** September 1980—Present.

**Objective:** To provide the student with an indepth understanding of the biologic activity of specific drug groups.

**Instruction:** Details of the biologic activity of muscle relaxants, CNS active drugs, analeptics, autonomic drugs, antihypertensives, cardiovascular drugs, hormones, antihistamines, therapeutic gases, bronchodilators, narcotics, and narcotic antagonists.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Pharmacology (7/81).

### Principles of Anesthesia Practice I

Refer to Introduction to Anesthesia.

### 1. Principles of Anesthesia Practice II
### 2. Principles of Anesthesia Practice III

**Location:** Kings County Hospital Center—School of Anesthesia for Nurses, 451 Clarkson Avenue, Brooklyn, NY.

**Length:** 1. 60 hours (20 weeks).
2. 60 hours (20 weeks).

**Dates:** January 1981—Present.

**Objective:** To provide the student with an advanced, in-depth knowledge of anesthetic management in specialty areas.

**Instruction:** Physiologic, pharmacologic, and clinical aspects are integrated to provide a sound basis for the safe practice of obstetric, pediatric, neurosurgical, and cardiac anesthesia.

**Credit recommendation:** In the graduate degree category, 6 semester hours in Applied Physiology (Health-Related) (7/81). NOTE: Courses 1 and 2 must both be completed to receive credit.

# LENOX HILL HOSPITAL

Lenox Hill Hospital, founded in 1857, is a voluntary, nonprofit hospital located in Manhattan, New York. The hospital provides a full range of medical services-inpatient services for 700, an outpatient and emergency pavilion, and an ambulance service. The medical staff consists of 500 physicians and 2,500 administrative, professional-technical, clerical, and maintenance employees. The hospital is dedicated to the education and training of doctors, nurses, and other personnel and to providing the facilities for research to further medical knowledge.

The Hospital's Training, Education, and Employee Development Department conducts a variety of training programs and assists employees in career development and planning. Courses are conducted in management development, employee orientation, and general topic areas.

Source of official student records: Training Director, Lenox Hill Hospital, 100 East 77th Street, New York, New York 10021.

## Health Services Administration in the United States

**Location:** Lenox Hill Hospital, 100 East 77th Street, New York, NY.

**Length:** 32 hours (16 weeks).

**Dates:** January 1979—January 1980.

**Objective:** To provide participants with an understanding of the concepts, principles, and problems of the organization, financing, and administration of health care in the United States, and to enable participants to analyze the relationships among government and private health care agencies and systems.

**Instruction:** Health care as a system; health data; disease; health personnel; ambulatory care; hospitals; mental health; financing of health care; health economics; the role of government; the federal legislative process; health planning; quality control; cost control; national health insurance. A written report on the organizational analysis of a health care institution is required of each participant.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Health Management or Health Services Administration (1/79).

## Motivational Dynamics

**Location:** Lenox Hill Hospital, 100 East 77th Street, New York, NY.

**Length:** 36 hours (24 weeks).

**Dates:** September 1976—January 1980.

**Objective:** To improve the effectiveness of practicing first-line supervisors through increased knowledge of management practices and the behavioral sciences and their application on the job.

**Instruction:** Overview of motivational theory (McGregor, Freud, Maslow, Herzberg); group dynamics; productivity and the maintenance of morale; effective supervision; participative management; the change process; the communication process; management by objectives; organizational development. The course includes lectures, discussion, video presentations, role plays, case studies, and in-basket exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Behavioral Science or Management (8/76).

# LETCHWORTH VILLAGE DEVELOPMENTAL CENTER

Letchworth Village Developmental Center, which was founded in 1911, is a large State facility for the care and treatment of the mentally retarded. The Center is part of the New York State Office of Mental Retardation and Developmental Disabilities. It has 2,500 residents and employs a staff of 2,500 persons. The Center is in transition from a primarily custodial institution to one in which active treatment designed to locate current residents in the larger community is stressed.

Within the Center the Education and Training Department is an administrative support unit which provides instructional programs to all the facility's staff. Programs are developed in various areas to address identified needs among the staff.

Source of official student records: Director, Education and Training Department, Letchworth Village Developmental Center, Thiells, New York 10984.

## MENTAL HYGIENE THERAPY AIDE TRAINEESHIP

The courses listed below are part of the Mental Hygiene Therapy Aide Traineeship. This is a State-mandated one-year program of instruction, job performance, and evaluation. It is designed to increase the treatment skills of Therapy Aides working with the developmentally disabled. Over the one-year period there are 100 hours of classroom instruction and 160 hours of structured on-the-job training. The program is used in evaluating the trainee's ability to advance to permanent G-9 Mental Hygiene Therapy Aide status.

Please note that a student should successfully complete the one-year Traineeship in order to receive credit for any of the courses listed below.

### Basics in Health Sciences

**Location:** Letchworth Village Developmental Center, Thiells, NY.

**Length:** 50 hours (52 weeks).

**Dates:** August 1976—Present.

**Objective:** To provide a basic knowledge of health aspects needed in the care of the retarded.

**Instruction:** Introduction to human biology; first aid; personal hygiene; common diseases; medication.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Health Science (10/77). NOTE: The entire one-year traineeship must be completed to receive credit.

### Intervention Techniques in Mental Retardation

**Location:** Letchworth Village Developmental Center, Thiells, NY.

**Length:** 50 hours (52 weeks).

**Dates:** August 1976—Present.

**Objective:** To provide a basic introduction to the knowledge and skills needed in the habilitation and normalization of the mentally retarded.

**Instruction:** Behavior modification terminology and applications; interaction skills and team function; normalization.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Applied Behavioral Science (10/77). NOTE: The entire one-year traineeship must be completed to receive credit.

### Practicum in the Care of the Retarded

**Location:** Letchworth Village Developmental Center, Thiells, NY.

**Length:** 160 hours (52 weeks).

**Dates:** August 1976—Present.

**Objective:** To provide a field experience in ongoing total care of the mentally retarded.

**Instruction:** Utilization of acquired skills in an applied work setting, including interaction with residents to maintain and promote physical and social functioning.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Applied Behavioral Science (10/77). NOTE: The entire one-year traineeship must be completed to receive credit.

# LIFE OFFICE MANAGEMENT ASSOCIATION, INC.

The Life Office Management Association, Inc. (LOMA) is a trade, research, and educational association of life insurance companies operating in the United States, Canada, and a number of other countries. The Association sponsors a variety of programs designed for career development in the life industry. Schools, seminars, and correspondence and independent study courses are conducted in management development, instruction and training, systems training, and communications.

Source of official student records: Registrar, Life Management Institute, Life Office Management Association, Inc., 100 Colony Square, Atlanta, Georgia 30361.

## FELLOW, LIFE MANAGEMENT INSTITUTE INSURANCE EDUCATION PROGRAM

The Fellow, Life Management Institute (FLMI) Insurance Education Program is intended primarily for home office and branch office employees of LOMA members. It currently enrolls more than 75,000 students a year.

The FLMI Program includes the study of life insurance, operations of life insurance companies, and management principles. To complete the Program, a student must pass nine examinations (Parts). Eight of these Parts are required; for the ninth Part, a student may elect from 11 specialized fields. The student who successfully completes eight 3-hour examinations plus the 3-hour specialty examination of his or her choice is designated a Fellow of the Life Management Institute. A student may take additional specialty examinations. The examinations for all Parts are administered under secure conditions throughout the United States and Canada and in many locations overseas.

Classroom instruction is not a major component of the FLMI Program; rather the system is designed to assess achievement through rigorous examinations. Students prepare for the examinations by independent study, through application of acquired experience, or in some cases through classroom instruction.

Careful attention is paid by LOMA to program development; both course content and examinations are constantly reviewed to remain in line with current trends in the field. Although standard textbooks are used when appropriate, many of the assigned textbooks and instructional materials have been developed specifically for use in the Program.

### Administrative Management (Part 9-AM)

**(Formerly Administrative Management [Part 8b-AM])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To provide managers with an awareness of the human aspects of control and information systems.

**Instruction:** Management control; management information systems (systems concepts, decision-making concepts, and the value of information); organizational development; technology; human aspects of control.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category (introductory), 3 semester hours in Information Systems or Management Control (11/74).

### Economics and Investments (Part 5)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To provide the student with a foundation in economic principles and general investment practices.

**Instruction:** The nature and scope of economics; the economic process; free enterprise economic systems; money and credit; the level of economic activity; income-expenditure analysis; monetary and fiscal policies; international economics; investment goals; types of securities and securities markets.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Economics or Finance (1/75).

### Electronic Data Processing (Part 8b-DP)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—May 1977.

**Objective:** To provide the student with an introduction to the technology of data processing and its applications.

**Instruction:** Fundamentals of computer systems and programming; data communications; trends in EDP technology; organization of EDP activities; computer applications in the life insurance business. Skill in a particular programming language is not developed.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Data Processing (11/74).

## Group Insurance (Part 9-GI)

**(Formerly Group Insurance [Part 8b-GI])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To provide the student with an understanding of the development, technical aspects, and administration of group life and health insurance coverages.

**Instruction:** Group life insurance plans; group health insurance plans; insurance organizations; eligible groups; group insurance administration (marketing, premiums, legal provisions, underwriting, and claims); self-insurance.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Industrial Relations or Life and Health Insurance (1/75).

## Information Systems (Part 9-IS)

**(Formerly Information Systems [Part 8b-IS])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1978—Present.

**Objective:** To enable the student to examine information systems theory and practices.

**Instruction:** Planning, including research, analysis, and the establishment of I.S. objectives; designing systems; implementing, including application of software development and hardware selection. Review of technologies, including data base concepts, data entry techniques, and distributed processing. Specific management concepts related to information systems organizations, including personnel, operations, and projects. Emphasis is on information requirements definition, alternative solutions (including manual and automated), data base support, and management of the information systems function.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business or Information Systems (6/78).

## Legal Aspects of Life Insurance (Part 3)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To acquaint the student with the legal environment in which a life insurance company operates, taking into account those factors affecting the company's product (contract law and product law) and the company's operation (agency law and corporate law).

**Instruction:** Sources of law; elements of life insurance contracts; the policy; the policyowner's rights and obligations; the beneficiary; validity of the contract; legal remedies; group life insurance; health insurance contracts.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Business Law or Life Insurance (1/75).

## Life and Health Insurance Claims (Part 9-CL)

**(Formerly Life and Health Insurance Claims [Part 8b-CL])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To familiarize the student with the medical, legal, and organizational aspects of claims administration.

**Instruction:** Medical aspects of claims (medical terminology, anatomy, and physiology); physical and mental disorders; claims administration (organization of the claims department, life insurance claims, health and accident insurance claims, disability claims, government insurance programs, and Canadian claims practices).

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Claims Administration or Secretarial Science (Medical) (1/75).

## Life Company Operations (Part 2)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To inform the student of the various functions performed within a life insurance company and its organizational structure.

**Instruction:** The relationship of the life insurance industry to the economies of the United States and Canada; types of life insurers (stock, mutual, fraternal societies, savings banks); the administrative, actuarial, marketing, underwriting, policyowner service, legal, investment, and accounting functions; the future of life insurance.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Life Insurance (7/75).

## Life Insurance Accounting (Part 4)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To provide the student with a background in basic principles of accounting and life insurance accounting; to explain the types of transactions and entries encountered in insurance accounting.

**Instruction:** Fundamentals of accounting; commercial versus insurance accounting; premium and commission accounting; policy benefit settlements; expenses and taxes; accounting for investments; composition of the annual statement.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting or Life Insurance (1/75).

## Life Insurance Accounting (Part 9-IA)

**(Formerly Life Insurance Accounting [Part 8b-IA])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—May 1977.

**Objective:** To present an advanced study of accounting concepts and techniques for management planning and control of life insurance companies.

**Instruction:** A review of basic accounting concepts; analysis of financial statements; accounting for assets; accounting for liabilities; accounting for capital and retained earnings; internal auditing in life companies; functional costs in life companies.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Accounting or Life Insurance (1/75).

## Life Insurance Investments (Part 9-LI)

**(Formerly Life Insurance Investments [Part 8b-LI])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To provide the student with an understanding of the policies and practices of investment management of financial institutions in varying economic environments.

**Instruction:** History and investment practices of financial institutions; investment risk factors; types of investments (securities, mortgage loans); valuation of assets; financial analysis.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking, Finance, or Insurance (1/75).

## Management Principles (Part 8)

**(Formerly Management Principles [Part 8a])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1973—Present.

**Objectives:** To provide an introduction to general management that covers underlying behavioral concepts, research on organizations, and a survey of management science techniques.

**Instruction:** The evolution of the concept of management; the classical, behavioral, and management science approaches to management; management functions (planning, organizing, and controlling); motivation, leadership, and work groups; contemporary management developments; quantitative methods.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in General Management (11/74).

## Management Science (Part 9-MS)

**(Formerly Management Science [Part 8b-MS])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1973—Present.

**Objective:** To provide the student with a survey of the scientific approach to solving problems in management, emphasizing the use of mathematical descriptions or models for planning, decision, and control purposes.

**Instruction:** Goal setting, modeling, and implementation: decision theory; planning models; control; supportive information systems.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category (introductory), 3 semester hours in Management Science (11/74).

## Managerial Accounting (Part 9-MA)

**(Formerly Managerial Accounting [Part 8b-MA])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1978—Present.

**Objective:** To provide the student with an introduction to managerial accounting with special emphasis on the use of accounting data for decision-making, planning, and control in a life insurance company.

**Instruction:** Particular emphasis is placed on the following topics: financial statements; operations planning and control; long-range planning; internal auditing; functional costs. Students are given an overview of the principles of GAAP, auditing and the computer, the budgetary process, and taxation in life insurance companies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Accounting or Life Insurance (6/78).

## Mathematics of Life Insurance (Part 6)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To introduce the student to the use of mathematical and financial relationships applied by actuaries in determining life insurance premiums, dividends, policy values, and reserves.

**Instruction:** Review of arithmetic and algebra; simple and compound interest; accumulated value and present value; annuities certain; life annuities; mortality tables; life insurance premiums; net level premium reserves; modified reserves; nonforfeiture values; policy dividends.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Finance, Life Insurance, or Mathematics (1/75).

## Office Administration (Part 7)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—May 1977.

**Objective:** To provide the student with a survey of the tools and techniques of effective office management, with emphasis on the considerations involved in life insurance agency administration.

**Instruction:** Office administration. Organization; systems and procedures; information processing; nomenclature of life insurance; agency costs and their control; performance standards and control.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Office Administration (11/74).

## Pension Planning (Part 9-PP)

**(Formerly Pension Planning [Part 8b-PP])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To present the student with a survey of pensions, profit sharing, and deferred compensation plans and their administration.

**Instruction:** History of private pension plans; basic features of a pension plan; types of plans; funding considerations; cost considerations; tax considerations; pension administration; inflation and pension planning; annuities and mutual funds.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Employee Benefits, Industrial Relations, or Life Insurance (1/75).

## Personnel Administration (Part 9-PA)

**(Formerly Personnel Administration [Part 8b-PA])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To provide knowledge concerning the integration of personnel into the organization in a manner that will meet the needs of both the individual and the organization.

**Instruction:** Personnel management functions. Recruitment (tests and interviews, job analysis, and manpower planning); development (training, appraisal, and advancement); compensation; integration (communication and conflict); safety and health.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Personnel Administration (11/74).

## Principles of Life Insurance (Part 1)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To acquaint the student with the nature of life insurance, the available plans and policies, the process of becoming insured, and the basic rights and obligations of the policyowner and the life insurance company.

**Instruction:** Survey of the principles of life insurance. Insurable risk; basic life insurance plans; premiums and reserves; the life insurance policy and its provisions; special policies and added benefits; industrial (debit) life insurance; group life insurance; health insurance (individual and group); annuities and retirement plans.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Life Insurance (1/75).

## Selection of Risks (Part 9-SR)

**(Formerly Selection of Risks [Part 8b–SR])**

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** January 1965—Present.

**Objective:** To provide the student with a detailed understanding of the underwriting function of life insurance companies, the management of the underwriting department, and its relationship with other departments.

**Instruction:** The underwriting function; physical impairments; nonphysical impairments; financial underwriting; reinsurance.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Life and Health Insurance or Secretarial Science (Medical) (1/75).

## Systems and Data Processing (Part 7)

**Location:** Independent study and proficiency examination program administered from the central offices of LOMA.

**Length:** Independent study.

**Dates:** September 1977—Present.

**Objective:** To provide the student with a basic understanding of the importance and operation of data processing systems.

**Instruction:** Data processing and computing systems. Data processing techniques and methods: CPU; I/O; secondary storage; communications equipment; application and operating systems; application systems for insurance transactions. The student is introduced to the systems concept, the phases of the life cycle of a system, and the hardware and software components of computerized systems. The concepts and components of systems and data processing are illustrated through insurance industry application.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business or Data Processing (6/78).

# LOMA MANAGEMENT PROGRAM

The LOMA Management Program is a three-week educational program designed for life insurance company executives. It is intended to provide them with an opportunity to broaden and deepen their knowledge of the managerial process and to gain greater insight into their overall responsibilities. Speakers include university professors and business leaders. The program is offered annually, and participants come from a wide range of companies throughout the United States and Canada.

## LOMA Management Program (Management Process)

**Location:** Tarrytown Conference Center, Tarrytown, NY.

**Length:** 99 hours (3 weeks); residential.

**Dates:** May 1970—May 1980.

**Objective:** To provide the student with the general concepts of management within the framework of three major areas: the management process; human factors in management; and environmental influences affecting the life insurance industry.

**Instruction:** Systematic approaches to managerial thinking; the planning process; management by objectives; long-range forecasting techniques; controlling and measuring results; communications in organizations; fundamentals of human behavior; social responsibilities of business; current legislative scene; current economic problems; perspective on the future. The course includes the use of lectures and group exercises.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Management (11/75).

# LINK, INC.

LINK, Inc., a community counseling and cultural center, is a subcontractor for the Nassau County Department of Drug and Alcohol Addiction. As part of its total services, LINK provides counselor and communication training to help professionals and paraprofessionals. Trainees are given the opportunity to obtain practical experience as part of these programs.

Source of official student records: Director of Training, LINK, Inc., 21 Langdon Place, Lynbrook, New York 11563.

### Advanced Communication and Counseling Skills

**Location:** 27 Hempstead Avenue, Lynbrook, NY.

**Length:** 62½ hours (25 weeks).

**Dates:** September 1974—September 1977.

**Objective:** To provide the student with an in-depth examination of the counseling process.

**Instruction:** Development of personal counseling techniques and styles through an exploration of the various counseling theories. Extensive use of experiential exercises, including a counseling practicum, video tape feedbacks, and peer critiques. (Prerequisite: Introduction to Communication Skills.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavioral Sciences, Communications, Counseling, or Social Work (2/76).

### Introduction to Communication Skills

**Location:** 27 Hempstead Avenue, Lynbrook, NY.

**Length:** 62½ hours (25 weeks).

**Dates:** September 1974—September 1977.

**Objective:** To provide students with basic training in communication and interpersonal skills.

**Instruction:** Development of effective communication skills, such as building trust relationships, attending behavior, active listening, and nonverbal communication within an affective and cognitive framework. Extensive use of experiential exercises, video tape feedbacks, and peer critiques.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Behavioral Sciences, Communications, Counseling, or Social Work (2/76).

# LITERACY VOLUNTEERS OF CONNECTICUT, INC.

The Literacy Volunteers of Connecticut is a voluntary organization whose goal is to reduce the number of adult and teenage functional illiterates through an individual tutoring program. It is affiliated with the Literacy Volunteers of America, Inc., which was started in Syracuse, New York, in 1962, and now operates in twenty-one states. The Connecticut organization has 12 local programs, with over 1,000 volunteer tutors.

All volunteer literacy tutors are required to complete the basic training course "Teacher Training/Tutorial Experience." The course is open to others on a space-available basis. The course is designed to prepare the volunteer to teach basic reading successfully to a functional illiterate on a one-to-one basis, using several techniques.

Source of official student records: State Director, Literacy Volunteers of Connecticut, 55 Elizabeth Street, Hartford, Connecticut 06105.

## Teaching Training/Tutorial Experience

**Location:** Bridgeport, Danbury, Hartford, Meriden, New Britain, New London, Norwalk, Norwich, Stamford, Torrington, Waterbury, and Willimantic, CT.

**Length:** 48 hours (12 weeks); classroom instruction and supervised tutorial training.

**Dates:** January 1975—June 1981.

**Objective:** To train volunteers to teach basic reading and writing skills to adult illiterates on a one-to-one basis.

**Instruction:** History and organization of Literacy Volunteers of America; problem and scope of illiteracy among adults; techniques of teaching basic reading and writing; sensitivity to the environment of the functional illiterate; positive reinforcement; instructional materials; supportive agencies for referral; practical experience in tutoring. Conferences, area meetings, and inservice training are held in new materials, new techniques, and affiliate management.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Reading Instruction (2/76).

# LITERACY VOLUNTEERS OF NEW YORK STATE, INC.

The Literacy Volunteers of New York State is a voluntary organization whose goal is to reduce the number of adult and teenage functional illiterates through an individual tutoring program. It is affiliated with the Literacy Volunteers of America, Inc., which was started in Syracuse, New York, in 1962, and now operates in 21 states. The New York State member organization has 24 local affiliates with approximately 1,700 volunteer tutors.

The Teacher Training/Tutorial Experience was developed by experts in the area of adult reading problems over a period of 10 years. It is designed to prepare the volunteer to teach basic reading successfully to functional illiterates on a one-to-one basis using several techniques.

Source of official student records: Coordinator, Literacy Volunteers of New York State, 237 Main Street, Suite 307, Buffalo, New York 14203.

## Teacher Training/Tutorial Experience

**Location:** Affiliates in New York State: Albany, Broome County, Buffalo, Cayuga County, Clinton County, Cortland, Geneva, Glens Falls, Jamestown, Lockport, Mt. Vernon, Nassau, New York City, Niagara Falls, Northern Westchester, Olean, Oneida, Oswego County, Rochester, St. Lawrence County, Schenectady, Syracuse, Troy, and Watertown.

**Length:** 48 hours (15 weeks); 3 weeks classroom instruction and 12 weeks supervised tutorial experience.

**Dates:** July 1974—June 1981.

**Objective:** To train volunteers to teach basic reading and writing skills to adult illiterates on a one-to-one basis.

**Instruction:** History and organization of Literacy Volunteers of America; problem and scope of illiteracy among adults; techniques of teaching basic reading and writing; sensitivity to the environment of the functional illiterate; positive reinforcement; instructional materials; supportive agencies for referral; practical experience in tutoring. Conferences, area meetings, and inservice training are held in new materials, new techniques, and affiliate management.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Reading Instruction (7/74).

# MANHATTAN DEVELOPMENTAL CENTER

Manhattan Developmental Center, a unit of the New York State Office of Mental Retardation and Developmental Disabilities, was established to serve the needs of mentally retarded and other developmentally disabled individuals in the Borough of Manhattan. The Center collaborates with local public and private agencies to provide a system of services to the retarded and developmentally disabled. These services cover such areas as health, education, placement, and other assistance necessary to help clients achieve their optimal levels of development and adaptation.

Within the Center, the Education and Training Department is a support unit which provides educational programs to the entire staff of the facility.

Source of official student records: Director of Education and Training, Manhattan Developmental Center, 75 Morton Street, New York, New York 10014.

## Deviancy and Normalization

**Location:** Sheridan Unit, Manhattan Developmental Center, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** September 1976—June 1981.

**Objective:** To provide course participants with a sensitivity to, and an understanding of, principles of normalization and how to implement them.

**Instruction:** Definitions of deviance; history of social response to deviance; labeling theory; psychological effects of the environment; interrelationship between the deviant label and the environment; principles of normalization.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Human Services, Mental Retardation, Psychology, Social Work, or Sociology (10/79).

## Try Another Way Task Analysis

**Location:** Sheridan Unit, Manhattan Developmental Center, New York, NY.

**Length:** 40 hours (4 weeks).

**Dates:** June 1978—June 1981.

**Objective:** To provide the course participant with an understanding of Gold's task analysis instructional technology.

**Instruction:** Societal perspective on handicapped persons; task analyses; assessment of skill competencies of mentally retarded/handicapped persons; implementation of existing modalities for developing skill competencies to perform tasks.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Human Services, Mental Retardation, or Social Sciences (10/79).

## Working in Group Homes

**Location:** Sheridan Unit, Manhattan Developmental Center, New York, NY; various group home sites.

**Length:** 40 hours (5 weeks).

**Dates:** April 1978—June 1981.

**Objective:** To provide institutional staff with some of the necessary skills and current knowledge in the field of mental retardation in order that they may function competently in a group home setting.

**Instruction:** Task analysis; behavior modification; goal planning and team process; normalization; fire and safety considerations; recreation/leisure activities; community relations; orientation to mental retardation; major implications of PL94-142. Field visits are a required part of the course.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hour in Behavioral Science, Education, Psychology, or Sociology (10/79).

# MANUFACTURERS HANOVER TRUST COMPANY

Manufacturers Hanover Trust Company, as one of the country's largest money center banks, provides lending, depository, and related financial services to commercial, industrial, financial, and governmental customers, and a complete range of retail banking services to individuals and small- and medium-sized businesses. Manufacturers Hanover operates domestically through a network of 201 branches in New York City and its nearby counties, and through a number of specialized departments. Internationally, it operates through its New York City headquarters, Edge Act subsidiaries located in Los Angeles and Miami, overseas branches, and a network of representative offices, subsidiaries and affiliated banks, and financial institutions and correspondent banks.

## HUMAN RESOURCES–OPERATIONS DIVISION

The primary function of Human Resources is to coordinate the staffing, training, and development needs of the Central Operations Division of the Bank. The Managing Clerical Production seminar, outlined below, is one of the many programs provided for the training and development of managers and supervisors.

Source of official student records: Training Director, Manufacturers Hanover Trust Company, 320 Park Avenue, 24th Floor, New York, New York 10022.

### Managing Clerical Production

**Location:** Human Resources Department, 4 New York Plaza, New York, NY.

**Length:** 35 hours (1 week).

**Dates:** January 1978—Present.

**Objective:** To provide participants with the techniques and tools necessary to cost-effectively supervise in a production-oriented environment.

**Instruction:** Data simplification and analysis; forecasting; measuring production standards; variable staffing; unit costing; quality control; decisionmaking; management by objectives; employee performance and feedback. The course format includes lecture, discussion, a computer simulation game, and completion of an on-the-job project.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Operations Management (10/78). NOTE:Only those participants whose transcripts indicate that they have successfuly completed an additional, optional final examination should be considered for the credit recommendation.

## MANAGEMENT TRAINING PROGRAM–FINANCE

The courses outlined below are part of Manufacturers Hanover's Management Training Program in Finance, which is the primary program for training lending officers for the Bank's metropolitan, national, and international divisions. Professional educators associated with graduate schools of business are hired to develop and teach the courses.

Source of official student records: Credit Department, Manufacturers Hanover Trust Company, 350 Park Avenue, New York, New York 10022.

### Accounting

**Location:** Corporate headquarters, 350 Park Avenue, New York, NY.

**Length:** **Version 1:** 54 hours (6 weeks).
**Version 2:** 75 hours (8 weeks).

**Dates:** **Version 1:** February 1977—May 1978.
**Version 2:** May 1978—Present.

**Objective:** **Version 1:** To provide the student with an understanding of accounting concepts and methods, thereby enabling him or her to fully understand financial statements and to analyze financial reports. **Version 2:** To provide the student with an understanding of accounting concepts and methods, thereby enabling him or her to analyze and interpret financial statements in a decision making environment.

**Instruction:** **Version 1:** Basic accounting concepts; the accounting cycle; generally accepted accounting principles; corporate investments; cash flow; reporting practices. Problem solving exercises are used.

**Version 2:** Basic accounting concepts and procedures; the accounting cycle; generally accepted accounting principles; inventories and long-lived assets, including current costing requirements; long-term liabilities, including bonds, leases, and pensions; shareholders' equity; corporate investments, including consolidated financial statements; cash flow statements; current topics affecting reporting practices.

**Credit recommendation: Version 1:** In the graduate degree category, 4 semester hours in Business Administration or Financial Accounting (4/78). **Version 2:** In the upper division baccalaureate category, 6 semester hours in Business Administration or Financial Accounting; or in the graduate degree category, 4 semester hours in Business Administration or Financial Accounting (9/80).

## Corporate Finance

**Location:** Corporate headquarters, 350 Park Avenue, New York, NY.

**Length: Version 1:** 39 hours (5 weeks).
**Version 2:** 65 hours (7 weeks).

**Dates: Version 1:** March 1977—November 1979.
**Version 2:** November 1979—Present.

**Objective:** To provide the student with a comprehensive understanding of the ways in which businesses finance and organize their operations.

**Instruction: Version 1:** Evolution of finance; capital budgeting; cost of capital; types of financing alternatives; directions of finance. Question sets and problem-solving exercises are used. **Version 2:** Evolution and function of finance; ratios; capital budgeting; cost of capital; working capital management; financing alternatives and policy; dividend policy; current directions in finance theory and practice. Simulation exercise using computer in financial management.

**Credit recommendation: Version 1:** In the upper division baccalaureate category, 3 semester hours in Business Administration or Corporate Finance (4/78). NOTE: A student may elect to take an optional, additional final examination of a more rigorous nature. Upon successful completion of this examination, 3 semester hours of graduate, rather than undergraduate, credit is recommended in Business Administration or Corporate Finance. **Version 2:** In the upper division baccalaureate category, 6 semester hours in Business Administration or Corporate Finance; or in the graduate degree category, 4 semester hours in Business Administration or Corporate Finance (9/80).

## Money and Banking

**Location:** Corporate headquarters, 350 Park Avenue, New York, NY.

**Length: Version 1:** 42 hours (5 weeks).
**Version 2:** 42 hours (4 weeks).

**Dates: Version 1:** October 1977—September 1980.
**Version 2:** September 1980—Present.

**Objective: Version 1:** To provide the student with an overview of banking and the financial market. **Version 2:** To provide the student with a comprehensive understanding of the U.S. and international money and banking environment and the interaction of the commercial bank industry with the national and the international economy.

**Instruction: Version 1:** The financial community; financial markets; the banking industry; bank regulations; bank management; macroeconomics. Question sets are used. **Version 2:** Evaluation and current structure of domestic financial intermediaries; current monetary aggregates; bank legislation, regulation and regulatory agencies; asset and liability management of commercial banks. The structure of the national economy and the interaction with commercial banking industry; analysis of the business cycle and interpretation of current business indicators. International economic transactions and interdependence; international banking environment; international capital markets; foreign banks in the U.S.; U.S. banks overseas; international banking regulation and legislation.

**Credit recommendation: Version 1:** In the upper division baccalaureate category, 3 semester hours in Business Administration or Money and Banking (4/78). NOTE: A student may elect to take an optional, additional final examination of a more rigorous nature. Upon successful completion of this examination, 3 semester hours of graduate, rather than undergraduate, credit is recommended in Business Administration or Money and Banking. **Version 2:** In the graduate degree category, 4 semester hours in Business Administration or Money and Banking (9/80).

# MARINE MIDLAND BANK

Marine Midland Bank services all regions of New York State, with 318 branch offices in 47 counties. It is the sixth largest bank in the State and employs over 10,000 persons.

Marine Midland sponsors a broad range of programs and courses in order to provide management and staff with the opportunity to become more productive in their present jobs and for self-development.

The courses listed below are offered to employees in the Western Region of the Bank to provide them with management theory and the opportunity to question it in terms of its practical application. These courses have been developed by utilizing the talents of professors from local colleges, as well as the expertise of officers within the bank.

Please note that the credit recommendations apply *only* to the courses as conducted at the Buffalo location.

Source of official student records: Management Development and Staff Training Division, Marine Midland Bank—Western, Marine Midland Center, Buffalo, New York 14203.

## Management Techniques

**Location:** Marine Midland Center, Buffalo, NY.

**Length:** 68 hours (17 weeks).

**Dates:** September 1971—December 1977.

**Objective:** To introduce personnel with college backgrounds to specific applications of selected management concepts in commercial banking operations.

**Instruction:** Management concepts applied to commercial bank operations. Marketing research; forecasting; profit planning; money and portfolio management; branch banking; loan and deposit policy; customer contacts; personnel administration. Course includes a computerized commercial bank management simulation game.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Banking and Management (2/75).

## Officer Development Program

**Location:** Marine Midland Center, Buffalo, NY; various local colleges.

**Length:** 84 hours (8 months).

**Dates:** September 1972—December 1977.

**Objective:** To introduce assistant managers to the problems and processes of management with special reference to banking; to prepare them for increased managerial responsibilities.

**Instruction:** Introduction to integrative, general management problems and processes. Basic concepts of planning, leadership, communication, motivation, and decision analysis; introduction to functional areas of project management, finance, marketing, and labor relations; introduction to accounting principles. Emphasis is on the functional, day-to-day operating environment of a commercial bank (banking operations, sales and marketing, cost control, community relations, and personnel management). Course material is presented through reading assignments, class discussions, and lecture presentations. The course includes a management simulation experience emphasizing group problem-solving and decisionmaking behavior and an extensive analysis and report on a real bank management problem.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Integrative General Management and 3 semester hours in Commercial Bank Management; or in the graduate degree category, 3 semester hours in General Management (2/75).

## Personal Development Program

**Location:** Marine Midland Center, Buffalo, NY.

**Length:** 132 hours (44 weeks).

**Dates:** April 1975—December 1977.

**Objective:** To assist personnel in the development of techniques of management and banking skills in preparation for possible assignment into management.

**Instruction:** A survey of technical and management concepts relating to commercial banking. Marketing research; forecasting and profit planning; money and portfolio management; branch banking; loan and deposit policy; customer contracts; personnel administration; an introduction to accounting principles. Course includes a computerized commercial bank management simulation game.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Banking and Management (2/75).

# MARSH & MC LENNAN, INCORPORATED

Marsh & McLennan, Incorporated is a financial services insurance brokerage firm. Insurance brokerage services are provided in the areas of property, casualty, aviation, boiler and machinery, claims service, financial services, marine, and risk management.

Marsh & McLennan's educational activities include training for insurance professionals at all levels. A "stairstep" format is used, introducing each insurance professional to continually advanced techniques of insurance brokerage, communication, industry expertise, and managerial skills.

Source of official student records: Vice President, Professional Development, Marsh & McLennan, Incorporated, 1221 Avenue of the Americas, New York, New York 10020.

## Business Presentation Skills: Oral and Written
## 1. Oral Presentation Skills
## 2. Written Presentation Skills

**Location:** Various locations throughout the United States.

**Length:** 1. 24 hours (3 days).
2. 24 hours (3 days).

**Dates:** 1. February 1980—Present.
2. April 1980—Present.

**Objective:** To develop oral and written skills of management personnel in making proposals to clients and prospective clients.

**Instruction:** Application of expository and persuasive principles to the planning, preparation, and presentation of oral and written reports. Topics covered include: audience adaptation; organization of ideas; outlining; tone; use of examples and illustrations; design and use of visual aids; effective tone in speech and writing. Course format includes lecture, discussion, and analysis of students' writing and videotaped oral presentation.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Business Communication (8/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Emerging Techniques and Services for Major Accounts (Selected Topics in Risk Management)

**Location:** Various locations throughout the United States.

**Length:** 32 hours (4 days).

**Dates:** March 1980—Present.

**Objective:** To provide the student with an understanding of the nature and application of selected risk management techniques.

**Instruction:** Risk management process; actuarial analysis; risk control; discounted cash flow; captive insurance companies. Course format includes lecture/discussion, analysis of case studies, and role-play situations.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Finance, Insurance, or Risk Management (8/80).

## Management Methods

**Location:** Various locations throughout the United States.

**Length:** 45 hours (1 week).

**Dates:** March 1980—Present.

**Objective:** To provide career management personnel with the skills necessary to manage human, financial, and material resources more effectively.

**Instruction:** An introduction to, and application of, the following topics: time management; leadership styles; decision making; motivation; planning and implementation; communication skills; strategic and financial planning. A computer-assisted case study is used.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Managerial and Financial Topics (12/80).

## Oral Presentation Skills

Refer to Business Presentation Skills: Oral and Written.

## Principles of Insurance

**Location:** Various locations throughout the United States.

**Length:** 120 hours (3 weeks).

**Dates:** April 1980—Present.

**Objective:** To acquaint the student with property and liability insurance principles and the major features of common property and liability insurance contracts.

**Instruction:** History and fundamentals of insurance; insurance and society; key provisions and exclusions of commonly written insurance contracts; risk management concepts; measuring loss exposures. Case studies are used.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Insurance (8/80). NOTE: This course is equivalent to a survey course in Property and Liability Insurance: Principles and Coverages.

## Written Presentation Skills

Refer to Business Presentation Skills: Oral and Written.

# McGRAW-HILL, INC.

McGraw-Hill, which was founded in 1888 and is headquartered in New York City, is a leader in the fields of information and communications, both for the general public and for specialized professional areas. The corporation includes book companies, a publications company, an information systems company, a broadcasting company, and Standard and Poor's.

McGraw-Hill offers many courses to its employees to assist their professional career development. The Office Training Center is reponsible for designing and conducting training programs and related activities for both new and permanent employees. These programs include specialized clerical and secretarial training courses; continuing education courses in such areas as business education and the liberal arts; skill refresher courses; and other workshops, practicums, and seminars.

Source of official student records: Manager, Office Training Center, McGraw-Hill, Inc., 1221 Avenue of the Americas, New York, New York 10020.

### Advanced Shorthand Dictation Clinic (BE-102)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY

**Length:** 30 hours (15 weeks).

**Dates:** September 1973—Present.

**Objective:** To increase the student's stenographic speed to 100-120 words per minute with accurate transcription.

**Instruction:** The course is designed to enable the student who has already mastered shorthand theory to increase his/her skills. Emphasis is on dictation and transcription to build both speed and accuracy. (Prerequisite: Shorthand II or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Secretarial Science (12/76).

### Effective Communications (BE-401)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 30 hours (12 weeks).

**Dates:** September 1977—Present.

**Objective:** To enable the student to express ideas more clearly and to develop a personal writing style.

**Instruction:** Review of grammar and punctuation as they relate to business writing; letter format; proofreading; routine letter writing; refusal letters; sales letters; memos; proposals; library resources. Emphasis is on practice in writing memos and letters to improve writing skill and develop personal style.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Communication (5/77).

### 1. Elementary Principles of Accounting I (BE-300)

### 2. Principles of Accounting II (BE-301)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 1. 30 hours (15 weeks).
2. 30 hours (15 weeks).

**Dates:** February 1978—Present.

**Objective:** To provide basic knowledge in accounting principles and procedures.

**Instruction:** Analysis of transactions; the accounting cycle; special journals and ledgers; end-of-cycle procedures; payroll and control systems; payables and receivables; valuation of other assets; preparation of financial statements; completion of accounting cycle. Text used: *"Accounting: The Basis for Business Decisions"* by Meigs-Johnson-Meigs.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (9/78). NOTE: Courses 1 and 2 must both be completed to receive credit.

### English for Business (BE-400)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** February 1977—Present.

**Objective:** To enable the student to develop skill in the comprehension and use of grammatical concepts and in writing to clearly express an intention.

**Instruction:** Initial diagnostic testing of students identifies specific problem areas (usually grammar, spelling, usage, vocabulary, and punctuation) and determines the amount of attention to be devoted to each topic. Techniques of organizing and writing business letters and memos are developed.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Communications (5/77).

### French for Beginners (LA-100)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To provide students with an introduction to the basic elements of French with a focus on the conversational approach.

**Instruction:** Emphasis is on the acquisition of basic language skills through the practice of listening, speaking, reading, and writing. The course includes use of dialogs, pattern drills, and dictations, with particular emphasis on everyday expressions. This course is designed for students who have no prior knowledge of French.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in French (12/78).

## French II(LA-101)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To develop students' conversational skills in French with a focus on speaking, listening, and grammatical analysis.

**Instruction:** This course is a continuation of French for Beginners (LA-100), and is designed for students who have previously taken an introductory French course. Emphasis is on the conversational aspects of French, supported by work with dialogs, idiomatic expressions, elements of grammar, and reading and writing exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in French (12/78).

## Graphics—Printing Process and Production (BE-500)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** February 1978—Present.

**Objective:** To provide a basic understanding of production techniques for books and publications.

**Instruction:** Organization of materials and mechanical preparation of books and publications for the printer; emphasis placed on copy casting and type specifications. Instruction in computerized typesetting, color separations, line art, paper selection, and binding procedures. Films and visual aids are used in addition to field trips to printing plants.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Design Media or Production Design (9/78).

## Italian for Beginners (LA-300)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To provide students with an introduction to the basic elements of Italian with a focus on the conversational approach.

**Instruction:** Emphasis is on the acquisition of basic language skills through the practice of listening, speaking, reading, and writing. The course includes use of dialogs, pattern drills, and dictations, with particular emphasis on everday expressions. This course is designed for students who have no prior knowledge of Italian.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Italian (12/78).

## Italian II (LA-301)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To develop students' conversational skills in Italian with a focus on speaking, listening, and grammatical analysis.

**Instruction:** This course is a continuation of Italian for Beginners (LA-300), and is designed for students who have previously taken an introductory Italian course. Emphasis is on the conversational aspects of Italian, supported by work with dialogs, idiomatic expressions, elements of grammar, and reading and writing exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Italian (12/78).

## Principles of Accounting II (BE-301)

Refer to Elementary Principles of Accounting I (BE-300).

## 1. Shorthand I: Theory and Basic Principles (BE-100)
## 2. Shorthand II: Advanced Theory, Dictation, and Transcription (BE-101)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 1. 50 hours (12½ weeks).
2. 50 hours (12½ weeks).

**Dates:** February 1971—Present.

**Objective: Course 1:** To provide the student with an understanding of the principles of Gregg Shorthand in order to develop skill in taking dictation of business letters and transcribing them. **Course 2:** To increase the student's stenographic speed to 80-90 words per minute and to develop skill in transcription.

**Instruction: Course 1:** The course is designed for individuals who have had no instruction in shorthand. Emphasis is on mastery of Gregg Shorthand theory (Lessons 1-21) with some dictation for speed building. No particular speed is required of the student by the end of the course. **Course 2:** Gregg Shorthand theory (Lesson 22-48); introduction of specialized terms and phrases used in the printing and publishing industry with emphasis on abbreviated phrases and brief forms; considerable practice in office dictation and transcription. (Prerequisite: Shorthand I or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Science (12/76). NOTE: Both courses must be completed to receive credit.

## Shorthand II: Advanced Theory, Dictation, and Transcription (BE-101)

Refer to Shorthand I: Theory and Basic Principles (BE-100).

## Spanish for Beginners (LA-200)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To provide students with an introduction to the basic elements of Spanish with a focus on the conversational approach.

**Instruction:** Emphasis is on the acquisition of basic language skills through the practice of listening, speaking, reading, and writing. The course includes use of dialogs, pattern drills, and dictations, with particular emphasis on everyday expressions. This course is designed for students who have no prior knowledge of Spanish.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Spanish (12/78).

## Spanish II (LA-201)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1979—Present.

**Objective:** To develop students' conversational skills in Spanish with a focus on speaking, listening, and grammatical analysis.

**Instruction:** This course is a continuation of Spanish for Beginners (LA-200), and is designed for students who have previously taken an introductory Spanish course. Emphasis is on the conversational aspects of Spanish, supported by work with dialogs, idiomatic expressions, elements of grammar, and reading and writing exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Spanish (12/78).

## Typewriting I (BE-200)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 50 hours (12½ weeks).

**Dates:** September 1971—Present.

**Objective:** To provide the student with a thorough knowledge of typing through finger, hand, and mental indoctrination.

**Instruction:** Mastery of the keyboard with a minimum attainment level of 30-35 words per minute with 95 percent accurarcy; alphabetic review and stroke techniques; introduction to business letter format; addressing envelopes; setting up simple tabulations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Secretarial Science (12/76).

## Typewriting II (BE-201)

**Location:** Office Training Center, 1221 Avenue of the Americas, New York, NY.

**Length:** 50 hours (12½ weeks).

**Dates:** September 1971—Present.

**Objective:** To develop the student's typing speed to 50-55 words per minute with 95 percent accuracy.

**Instruction:** Advanced business letter and tabulation formats; interoffice memoranda; manuscript typing; proofreader marks; various business forms. (Prerequisite: Typewriting I or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Secretarial Science (12/76).

# MEMORIAL SLOAN-KETTERING CANCER CENTER SCHOOL OF RADIATION THERAPY TECHNOLOGY

Memorial Sloan-Kettering Cancer Center is one of the major research and treatment centers for cancer and its allied diseases in the world. Dedicated to the treatment of cancer patients since its establishment in 1887, Memorial was one of the first institutions to recognize the potential for using radiation to treat neoplastic disease. The Radiation Therapy Department, with its sophisticated equipment and large staff, is devoted to the care of patients and to the establishment of radiation research and teaching programs.

The Radiation Therapy Technology Program is a 24-month program that combines both clinical and didactic instruction. Courses are taught by physicians and other persons highly qualified in their respective fields. Graduates of the Program are eligible to take the examination given by the American Registry of Radiologic Technologists in conjunction with the New York Department of Health.

Source of official student records: Educational Director, School of Radiation Therapy Technology, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, New York 10021.

## Anatomy and Physiology

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 90 hours (30 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To provide the student with knowledge of the structure and function of the human body.

**Instruction:** The body as an integrated whole; skeletal and articular systems; axial and appendicular skeleton; muscular system; integration and control of the body; circulatory and lymphatc systems; respiratory, digestive, and urinary systems; reproduction; endocrine system and fluids and electrolytes. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Allied Health Sciences or Biology (4/80).

## Clinical Practicum

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 3,400 hours (2 years).

**Dates:** January 1975—June 1981.

**Objective:** To allow the student to obtain experience in the practice of radiation therapy technology in a controlled clinical setting.

**Instruction:** Students function as learning members of the hospital's radiation therapy department. Experience is provided in patient set-up, localization of tumors, immobilization device fabrication, treatment planning, operation of various radiation treatment units, basic nursing skills, emergency procedures, radiation safety, and psychological needs of the patient. Direct supervision is provided to develop and evaluate the student's clinical skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 22 semester hours in Allied Health Sciences (4/80).

## Clinical Radiation Therapy

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 135 hours (45 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To provide the student with a description of the various treatment modalities, and an understanding of the principles of treatment as applied to the various body systems.

**Instruction:** Treatment terminology; treatment units; shielding and accessory devices; management and treatment of malignancies of each organ and system in the body; tissue tolerances. (Prerequisites: Anatomy and Physiology, Physics I, and Radiation Biology.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 9 semester hours in Allied Health Sciences (4/80).

## 1. Darkroom Chemistry and Basic Radiography
## 2. Ethics, Records, Orientation, and Terminology
## 3. Nursing

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

Length: 1. 15 hours (15 weeks).
2. 15 hours (15 weeks).
3. 15 hours (15 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To introduce the student to darkroom chemistry, basic radiography, ethics, departmental organization, terminology, and nursing procedures as applied to the practice of radiation therapy technology.

**Instruction: Course 1:** Darkroom chemistry; basics of radiographic quality. **Course 2:** Professional behavior; confidentiality; legal aspects of patient records; professional organizations; statistics; filing systems. **Course 3:** Patient examinations; special procedures; blood studies; vital signs; aseptic techniques; radiation therapy equipment; medications; emergency care; nutrition; psychological status of the cancer patient.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences (4/80). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Ethics, Records, Orientation, and Terminology

Refer to Darkroom Chemistry and Basic Radiography.

### Mathematics
### (Fundamentals of Mathematics)

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To provide the student with a review of general mathematics.

**Instruction:** General review of basic numerical computations, scientific notation, exponents, and logarithms. Algebraic equations and trigonometric functions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Mathematics (4/80).

### Nuclear Medicine

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 15 hours (15 weeks).

**Dates:** December 1975—June 1981.

**Objective:** To provide the student with an understanding of the basic principles of nuclear medicine, including radiation detection and instrumentation as it applies to nuclear medicine.

**Instruction:** Nuclear science: structure of the atom; nuclides and radionuclides; origin of nuclides. Clinical nuclear medicine: fundamentals of scanning; radiation detection; instrumentation; clinical procedures. (Prerequisites: Physics I and Mathematics.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences (4/80).

### Nursing

Refer to Darkroom Chemistry and Basic Radiography.

### Oncology

Refer to Pathology and Oncology.

### Pathology

Refer to Pathology and Oncology.

### Pathology and Oncology
### 1. Pathology
### 2. Oncology
### 3. Technical Radiation Oncology

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 1. 15 hours (15 weeks).
2. 15 hours (15 weeks).
3. 15 hours (15 weeks).

**Dates:** 1. January 1975—June 1981.
2. January 1975—June 1981.
3. September 1978—June 1981.

**Objective:** To introduce the student to the basic principles of pathology as they apply to cancer management.

**Instruction:** Cell structure; general pathology of tumors; methods of tumor spread; tumors of each body system; repair and replacement tissue; carcinogenesis; radiation-induced skin and systemic effects; staging systems; radiation oncology; surgical oncology; chemotherapy; immunotherapy; conjunctive therapy; results of treatment; modalities of treatment available in radiation therapy, and distinctive properties of each.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences (4/80). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Physics I

Refer to Radiological Physics.

### Physics II

Refer to Radiological Physics.

### Physics III

Refer to Radiation Therapy Physics.

### Physics IV

Refer to Radiation Therapy Physics.

### Radiation Biology

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 30 hours (30 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To provide the student with information about the interactions of various types of radiations with biologic systems, and the effects they have on these systems.

**Instruction:** Cell; radiation sickness; gene mutations; protection; theory of action; biochemistry; radiomimetic chemicals; cell death and replication; effects of various types of radiation on cells; oxygen enhancement ratios; radiation biologic effectiveness; total body radiation; chemotherapy. (Prerequisites: Anatomy and Physiology, Physics I, and Oncology.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Allied Health Sciences or Biology (4/80).

### Radiation Safety

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 30 hours (30 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To enable the student to understand ionizing radiation, and the need for protective measures and maximum safety precautions in radiography.

**Instruction:** Properties and production of X-rays; radiation units of measurement; interactions of radiation with matter; maximum permissible dose; principles of safety; introduction to radiation detection instruments; protective barriers; acute radiation syndromes; long-term effects of radiation; protective regulations; emergency procedures; survey of equipment (diagnostic X-ray, radiation therapy, and nuclear medicine facilities); dosimetry; brachytherapy. (Prerequisites: Anatomy and Physiology, Physics I, and Mathematics.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Allied Health Sciences (4/80).

### Radiation Therapy Physics
### 1. Physics III
### 2. Physics IV

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 1. 15 hours (15 weeks).
2. 30 hours (30 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To provide the student with a knowledge and understanding of the physical principles specific to the practice of radiation therapy.

**Instruction:** Measurement and specification of radiation quality and quantity; equipment calibration; external dosimetry; radioactivity; gas and scintillation detectors; brachytherapy; implant dosimetry; equipment (orthovoltage, megavoltage); high-LET treatment modalities. Laboratory work is *not* included. (Course 1 prerequisite: Physics II. Course 2 prerequisite: Physics III.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences (4/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Radiological Physics
### 1. Physics I
### 2. Physics II

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 1. 15 hours (15 weeks).
2. 30 hours (15 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To provide the student with a knowledge of the general theories of physics as they apply to radiation.

**Instruction:** Units of measurement; static and current electricity; instrumentation; electromagnetism; atomic structure; interaction of radiation with matter (X-ray spectrum); X-ray tubes; X-ray circuitry; filtration. Laboratory work is *not* included. (Course 1 prerequisite: Mathematics. Course 2 prerequisite: Physics I.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences (4/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Technical Radiation Oncology

Refer to Pathology and Oncology.

### Treatment Planning

**Location:** Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1975—June 1981.

**Objective:** To provide the student with a quantitative approach to radiation therapy treatment planning.

**Instruction:** Definition of terms; isodose charts; single and multiple fields; beam modification; dosage calculation; nominal standard dose; rotation therapy; auxiliary devices and use; gap calculations for adjacent fields; critical organ tolerances. (Prerequisite: Anatomy and Physiology, Physics I, Mathematics, Radiation Biology, and Technical Radiation Oncology.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences (4/80).

# MERRILL LYNCH & CO. INC.

Merrill Lynch & Co. Inc. is the parent company of one of the largest financial service organizations in the world. Through Merrill Lynch Royal Securities Ltd. and Merrill Lynch International, Inc., banking and brokerage services are provided by 66 offices in Canada and 27 other foreign countries. In the United States, the brokerage arm of the firm, Merrill Lynch, Pierce, Fenner & Smith, Inc. has over 400 offices. Through Merrill Lynch Government Securities, the firm acts as a nonbank dealer in government and agency securities. The firm is also active in insurance, real estate, equipment leasing, commodity brokerage, and investment banking. Merrill Lynch has over 30,000 employees, and its sales force numbers approximately 8,500.

Located at the corporate headquarters in New York City, the Training Department specializes in securities sales training, commodity sales training, management development, and personnel development. In a typical year, over 2,000 employees go through the various programs offered by the Training Department.

Source of official student records: Manager, Training Department, Merrill Lynch, Pierce, Fenner & Smith, Inc., One Liberty Plaza, New York, New York 10080.

## Advanced Management Development Program

**Location:** Training Center, One Liberty Plaza, New York, NY.

**Length:** 72 hours (8 weeks).

**Dates:** September 1975—June 1980.

**Objective:** To enable participants to understand the various aspects of the planning function, to relate the planning function to the other management functions, and to understand the process of management by objectives.

**Instruction:** Effective planning and evaluation; management forecasting; the position charter; action planning; communication problems; management of change; organizational development; employee performance appraisal and discipline. The course format includes lecture/discussion, case study analyses, and role-play exercises.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Basic Concepts of Management (1/79).

## Basic Management Development Program

**Location:** Training Center, One Liberty Plaza, New York, NY.

**Length:** 69 hours (8 weeks).

**Dates:** January 1974—June 1980.

**Objective:** To enable participants to understand the basic managerial functions of planning, leading, organizing, and controlling, and to assist participants in developing practical skills in these areas.

**Instruction:** Management planning; management leadership; motivation; situational thinking and decisionmaking; management organization and delegation; management control; performance appraisal. The course format includes lecture/discussion, case study analyses, and role-play exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Basic Concepts of Management (1/79).

## Securities Training Program (New York Phase)

Refer to A Study of the Securities Industry for the Professional Account Executive.

## 1. A Study of the Securities Industry for the Professional Account Executive
## 2. Securities Training Program (New York Phase)

**Location:** 1. Various Merrill Lynch sales offices throughout the world.
2. Training Center, One Liberty Plaza, New York, NY.

**Length:** 1. Directed study (approximately 420 hours over a 12-week period).
2. 170 hours (5 weeks).

**Dates:** May 1975—Present.

**Objectives:** To provide participants with a knowledge of typical investor needs, corporation finance, securities regulations, investment analysis, and basic investment products.

**Instruction:** Securities characteristics and features; securities regulations; mathematical analysis of securities; money market instruments; investment companies; market strategies; short- and long-term debt instruments; options; equities. **Course 1:** Programmed instruction is supplemented by chapter tests, centrally-controlled progress exams, a final exam, outside readings, TV-audio tapes, and on-the-job training. **Course 2:** Course format includes lecture/discussion, seminars, and role-play exercises.

**Credit recommendation: Course 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Finance (1/79). **Course 2:** In the graduate degree category, 4 semester hours in Finance (1/79). NOTE: Entrance into Course 2 presupposes knowledge of the material covered in Course 1. Participants who have not completed Course 1, but who have been determined to possess the equivalent knowledge, may take Course 2.

# DONALD T. REGAN SCHOOL OF ADVANCED FINANCIAL MANAGEMENT

The seven courses listed below constitute the curriculum of advanced study for account executives known as the Donald T. Regan School of Advanced Financial Management. Four additional courses are currently under development. All courses offered by the School are designed for self-paced, individual study, and employ various media including print, video, and computer-assisted instruction.

## Applied Economics

**Location:** Various Merrill Lynch sales offices throughout the world.

**Length:** Self-paced programmed instruction.

**Dates:** March 1981—Present.

**Objective:** To enable participants to identify major macroeconomic concepts and to apply these concepts in the selection and timing of investment recommendations.

**Instruction:** Socioeconomic forces and business factors for industry selection; effect of monetary conditions on investment decisions; inflation and government finance; consumer spending; economic growth and stabilization policies; credit supply and demand; fixed-income strategy formulation; investment strategy; securities selection techniques; growth stocks; equity selection; fixed-income securities selection; economics of real estate and oil and gas tax investments; communicating economic ideas. Text and practical exercises designed to simulate on-the-job situations are used. A comprehensive final exam is administered to participants.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in General Finance (10/81).

## Communications

**Location:** Various Merrill Lynch sales offices throughout the world.

**Length:** Self-paced programmed instruction.

**Dates:** March 1981—Present.

**Objective:** To provide participants with an introduction to the behavioral techniques applicable to interpersonal communications.

**Instruction:** The Johari Window; feedback and disclosure; assertiveness and responsiveness; style recognition; back-up style; coping with change; style modification; action strategies; obstacles to good listening; active listening; summarizing; the recommendation; overcoming reluctance; self-talk; alternatives to self-talk; visualizing new self-talk. Text, videotapes, and written activities are used. Participants must demonstrate their ability to apply the concepts learned in the course through a graded role-play situation.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Communications/Behavioral Aspects of Management (10/81).

## Fundamentals of Risk Management

**Location:** Various Merrill Lynch sales offices throughout the world.

**Length:** Self-paced programmed instruction.

**Dates:** March 1981—Present.

**Objective:** To acquaint participants with theories of portfolio analysis for individuals.

**Instruction:** Key concepts in portfolio analysis (portfolio weights, expected return, return variability, diversification, and portfolio risk); component analysis; relation between risk and return as defined by the Capital Asset Pricing Model; valuation of individual assets; basic models for analyzing present value and estimated return, and comparing estimated return with required return; effects of announcement anticipation on return; assessing accuracy of security analysts' forecasts; methods for forecasting risk; risk averison; utility ranking; expected utility rule. Text and written exercises are used. Optional computer-based activities are available to participants. A comprehensive final exam is administered to participants.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Finance/Investment Analysis (10/81).

## The Investor's Taxes/Business and Exempt Organizations, Trusts, Estates and Gifts

**Location:** Various Merrill Lynch sales offices throughout the world.

**Length:** Self-paced programmed instruction.

**Dates:** March 1981—Present.

**Objective:** To provide participants with an introduction to Federal tax principles as they apply to business and exempt organizations, trusts, estates and gifts.

**Instruction:** Partnerships; tax shelters and limited partnerships; basic corporate taxation; special types of corporations; public charities and private foundations; estate and trust income taxes; gift taxes; estate taxes. Text and written exercises are used. A comprehensive final exam is administered to participants.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Taxation (10/81).

## The Investor's Taxes/Individual Taxation

**Location:** Various Merrill Lynch sales offices throughout the world.

**Length:** Self-paced programmed instruction.

**Dates:** March 1981—Present.

**Objective:** To provide participants with an introduction to Federal tax principles as they apply to the individual investor.

**Instruction:** The investor's tax return; gross income; investor's transactions affecting gross income; deductions; special tax computations; foreign income; tax timing. Text and written exercises are used. A comprehensive final exam is administered to participants.

**Credit recommendation:** In the upper division baccalaureate category 2 semester hours in Taxation (10/81).

## Marketing

**Location:** Various Merrill Lynch sales offices throughout the world.

**Length:** Self-paced programmed instruction.

**Dates:** March 1981—Present.

**Objective:** To provide participants with an introduction to various marketing techniques, with emphasis on individual financial planning.

**Instruction:** The marketing concept: marketing versus sales; benefits of a marketing orientation; marketing and the account executive; consumer financial need. Market segmentation: identifying target customers; benefits of segmentation; methods of segmentation. Competitive position: identifying major competitors; assessing strengths and weaknesses; building on competitive advantages. Marketing strategy: selecting target customers; creating the marketing mix. Text and written exercises are used. Participants must demonstrate their understanding of the concepts learned in the course through a graded final activity.

**Credit recommendation:** In the upper division baccalaureate category, 1 semeter hour in Marketing (10/81).

## Options Strategies Applied

**Location:** Various Merrill Lynch sales offices throughout the world.

**Length:** Self-paced programmed instruction.

**Dates:** March 1981—Present.

**Objective:** To provide participants with an analysis of the various strategies for trading options.

**Instruction:** Review of options strategies; client suitability; strategies for different market conditions; position appropriateness; monitoring options positions in a changing market. Prospective participants must pass a pre-test with a minimum score of 80 percent before being admitted to the course. Instruction is entirely computer-based, with participants receiving both expert opinion and historical outcomes as feedback at important decision points. Participants receive on-line summaries of their performance at the end of each section.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Finance/Investment Analysis (10/81).

# MISERICORDIA HOSPITAL MEDICAL CENTER

Misericordia Hospital Medical Center is a voluntary nonprofit teaching hospital located in the Bronx, New York. The hospital, with nearly 400 beds, provides a wide range of clinical services to the northeast Bronx, and has modern facilities for diagnosis, treatment, and research.

## SCHOOL OF RADIOLOGIC TECHNOLOGY

The School of Radiologic Technology was established at Misericordia Hospital in 1967 when it was moved from St. Francis Hospital. Its major purpose is to meet the needs of the community for acquiring, training, and maintaining an adequate staff of well-qualified X-ray technologists.

The Radiologic Technology Program is a 24-month program of classroom and practical instruction. Its main objectives are to provide training in the theory and practice of radiologic technology, to enable graduates to perform the duties of a radiologic technologist at a high level of competence, and to meet the professional standards set by the American Registry of Radiologic Technologists and the New York State Department of Health, Bureau of Radiologic Technology. During the two years, students attend small, seminar-style classes, participate in laboratory sessions, work under close supervision in the hospital's radiology department, and receive individual training as needed.

Source of official student records: Registrar, Misericordia Hospital School of Radiologic Technology, Misericordia Hospital Health Sciences Building, 4401 Bronx Boulevard, Bronx, New York 10470.

### Clinical Practicum

**Location:** Misericordia Hospital Medical Center, 233rd Street, Bronx, NY.

**Length:** 2,220 hours (2 years).

**Dates:** September 1971 – August 1982.

**Objective:** To apply clinical experience necessary for the student to be able to apply concepts, skills, and knowledge effectively in radiology.

**Instruction:** Students function as learning members of the hospital's radiology department. Experience is provided in patient preparation, selection of proper techniques for radiographic analysis, administration of ionizing radiation for the purpose of diagnostic examination with appropriate radiation protection control. Close supervision is provided to develop and evaluate the students' clinical skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 12 semester hours in Allied Health Sciences or Radiography (1/78).

### Equipment Maintenance

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 15 hours (16 weeks).

**Dates:** September 1971 – August 1982

**Objective:** To provide the student with an understanding of the general care, maintenance, and testing of radiographic equipment.

**Instruction:** General care of equipment; functional tests (spinning top, the step wedge, tomographic depths, and X-ray tube); causes, correction, and prevention of electrical breakdowns.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Radiography (1/78).

### Film Critique

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 45 hours (32 weeks).

**Dates:** September 1971 – August 1982.

**Objective:** To enable the student to evaluate and improve the diagnostic quality of a radiograph.

**Instruction:** Patient profile, pathology, and condition during radiographic examination; technical factors and focus-film distance; collimation and shielding; positioning; anatomy; radiographic quality.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Radiography (1/78).

### Fundamentals of Radiography

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 45 hours (16 weeks).

**Dates:** September 1971 – August 1982.

**Objective:** To provide the student with an overview of the history of radiography and to introduce the student to the clinical aspect of training through knowledge of medical terminology, contrast media, and ethics.

**Instruction:** History of radiology: discovery and major advancements; radiologic technology as a health profession specialty; organization of the hospital and the department of radiology. Medical terminology: recognition of the written and spoken language of medicine: modifications of meaning; radiographic terms; medical abbreviations and symbols. Contrast media: basic forms; precautionary steps in preparation and administration; patient preparation. Professional ethics: definition, scope, and nature; confidentiality; the technologist's obligations; medicolegal problems and solutions; New York State licensure.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Radiography (1/78).

## Medical and Surgical Diseases

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 15 hours (16 weeks).

**Dates:** September 1971 – August 1982.

**Objective:** To provide the sutdent with an understanding of the effect on radiographic technique of changes that occur in disease and injury.

**Instruction:** Principles used in the identification of circulatory, degenerative, and neoplastic diseases; conditions of illness involving the systems of the body, with stress on radiographic technology.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences (1/78).

## Nuclear Medicine

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 30 hours (16 weeks).

**Dates:** September 1971 – August 1982.

**Objective:** To provide the student with an understanding of the basic principles of nuclear medicine including radiation detection and instrumentation as it applies to nuclear medicine.

**Instruction:** Nuclear science: structure of the atom; nuclides and radionuclides; origin of nuclides. Clinical nuclear medicine: fundamentals of scanning; radiation detection; instrumentation; clinical procedures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Allied Health Science or Nuclear Medicine (1/78).

## Nursing Procedures

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 15 hours (16 weeks).

**Dates:** September 1971 – August 1982.

**Objective:** To provide the student with an understanding of the proper methods of assisting and moving the patient, basic first aid procedures, aseptic techniques, and management of the seriously ill or injured patient.

**Instruction:** Body mechanics; aseptic technique; management of seriously ill or injured patient (acute abdomen, fractures, and dislocations); patient reaction to iodinated contrast media; the emergency tray/cart; basic first aid; nursing procedures pertinent to radiology (anesthesia, operating room radiography, bedside radiography, and handling patients with communicable diseases).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences (1/78).

## Principles of Radiographic Exposure

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 60 hours (32 weeks).

**Dates:** September 1971 – August 1982.

**Objective:** To provide the student with an understanding of the principles involved in the formation of the latent radiographic image and their application to different situations.

**Instruction:** Definitions; characteristics of X-rays; formation of the latent image; intensifying and fluoroscopic screens; prime factors of radiographic exposure; factors controlling and affecting radiographic quality, beam restricting devices (collimators, cones, cylinders, and diaphragms); filters; grids; stereoscopy; conditions influencing choice of chart; kilovoltage and milliamperage; review of grid conversion factors; review of screen conversion factors; kilovoltage distance conversion factors; use of higher kilovoltages; demonstration of radiographic experiments.

**Credit recommendation:** In the lower division bacclaureate/associate degree category, 4 semester hours in Allied Health Science or Radiography (1/78).

## Radiation Biology

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 30 hours (16 weeks).

**Dates:** September 1971 – August 1982.

**Objective:** To provide the student with the knowledge of elementary pathology as it relates to radiotherapy and radiation biology and the effects of ionizing radiation on biological systems.

**Instruction:** Elementary pathology; radiation and tumors; treatment planning; short-term effects of ionizing radiation; long-term somatic effects of ionizing radiation; biological effects of ionizing radiation; radiation effects of mitosis; oxygen effect.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Allied Health Science or Biology (1/78).

## Radiation Protection

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 45 hours (16 weeks).

**Dates:** September 1973—August 1982.

**Objective:** To enable the student to understand ionizing radiation and the need for protective measures and maximum safety in radiography.

**Instruction:** Properties and production of X-rays; radiation units of measurements; interactions of radiation with matter; maximum permissible dose; principles of safety; introduction to radiation detection instruments; protective barriers; ionizing radiation and public health.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Allied Health Science (1/78).

## Radiographic Anatomy and Physiology

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 90 hours (32 weeks).

**Dates:** September 1971—August 1982.

**Objective:** To provide the student with knowledge of the structure and function of the human body with emphasis on radiographic aspects.

**Instruction:** The body as an integrated whole; skeletal and articular systems; axial and appendicular skeleton; muscular system; integration and control of the body; circulatory and lymphatic systems; respiratory, digestive, and urinary systems; reproduction; endocrine system and fluids and electrolytes. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Allied Health Sciences or Biology (1/78).

## Radiographic Positioning

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 120 hours (48 weeks); includes 15 hours of laboratory work.

**Dates:** September 1971—August 1982.

**Objective:** To enable the student to identify and utilize the correct procedures to follow in positioning patients for radiography.

**Instruction:** General positioning: radiography of upper and lower extremities; chest; shoulder; clavicle; scapula; pelvis and hip; ribs; bony thorax; vertebral column; gastrointestinal tract; urinary tract; skull. Positioning for pediatric radiography. Skull radiography: terminology; routine skull series; sella turcica; optic foramina; orbital structures; mastoid processes of temporal bones; temporal styloid processes; pars petrosae of temporal bones; paranasal sinuses; facial and nasal bones, and teeth.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 7 semester hours in Allied Health Sciences or Radiography (1/78).

## Radiographic Processing

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 45 hours (16 weeks).

**Dates:** September 1971—August 1982.

**Objective:** To enable the student to develop the knowledge and skills necessary for darkroom procedure, to identify the chemical constituents of processing solutions and their functions, and to understand duplication of film and subtraction techniques.

**Instruction:** Darkroom procedures and chemical constituents and functions of processing solutions. Processing room design and function; photographic process; manual processing (the developer, rinsing, fixer, washing, and drying); preparation of solutions; automatic processing; radiographic film artifacts and their causes; silver reclamation; improvement of the diagnostic quality of radiographs by film evaluation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Heath Sciences or Radiography (1/78).

## Radiologic Physics

Refer to Radiologic Physics and Mathematics

## Radiologic Physics and Mathematics

**(Formerly Radiologic Physics)**

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 75 hours (32 weeks).

**Dates:** September 1971—August 1982.

**Objective:** To provide the student with a knowledge of the general theories of physics as they apply to radiographic practice.

**Instruction:** Fundamentals of mathematics: fractions; ratio and proportions; square roots; power of ten; elementary algebra and plane geometry as they apply to radiography. Radiologic physics: fundamental units; derived units; mechanics; matter; electrostatics; magnetism; electrodynamics; electromagnetism; transformers; X-ray tubes; roentgen rays; interaction of radiation and matter. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Allied Health Sciences or Physics (1/78).

## Special Procedures

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 60 hours (32 weeks).

**Dates:** September 1971—August 1982.

**Objective:** To provide the student with a knowledge of the supplementary procedures used in advanced technology and related radiographic equipment.

**Instruction:** Design, function, and maintenance of radiographic equipment used for special procedures: high output generators; special tables; rapid serial changes; pressure injectors; Polaroid units; phototiming units; photofluorographic equipment. Supplementary procedures: tomography; stereo radiography; direct enlargement radiography; mobile radiography; thermography; xeroradiography; ultransonography. Specific radiographic procedures. Imaging.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Allied Health Sciences or Radiography (1/78).

## Topographic Anatomy

**Location:** Misericordia School of Allied Health Science, 4401 Bronx Boulevard, Bronx, NY.

**Length:** 30 hours (16 weeks).

**Dates:** September 1971—August 1982.

**Objective:** To provide the student with an understanding of topographic anatomy as applied to radiography.

**Instruction:** A study of topographic anatomy, the relationship of organs to each other, and the location of organs using surface landmarks. Upper and lower extremities; neck; chest; abdominal and pelvic cavities; head. Radiographic film evaluation to identify topographic anatomic structures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences, Biology, or Radiography (1/78).

238

# MOBIL OIL CORPORATION

The Mobil Oil Corporation is one of the 10 largest industrial corporations in the world. It is engaged in the production, manufacture, transmission, and marketing of over 5,000 petroleum and chemical products. In 1974, Mobil companies maintained business interests in over 100 countries and employed over 73,000 people.

Mobil provides a variety of training and development opportunities to help employees improve their skills, keep abreast of new developments in their fields, and prepare themselves for advancement to positions of greater responsibility. These opportunities are provided through on-the-job coaching, developmental assignments, and formal training courses.

Source of official student records: Manager, Management and Professional Development, Mobil Oil Corporation, Room 1439, 150 East 42nd Street, New York, New York 10017.

## Factors in Management (Organization and Human Resource Management)

**Location:** Southbury, CT; various international locations.

**Length:** 94 hours (2 weeks); residential.

**Dates:** October 1971—November 1978.

**Objective:** To help managers improve their performance through the development of skills in analyzing management situations and problems and in applying more effective management actions on the job.

**Instruction:** Scope of the manager's job; management strategy; establishing management priorities; management of a multi-national company within a changing environment; joint venture management between governments and private corporations; personal factors in organizational effectiveness; performance improvement planning; decision making; personal growth planning. The course includes the use the lectures and group exercises.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Management (11/75).

## Human Forces in Management

**Location:** Various United States and international locations.

**Length:** 94 hours (2 weeks); residential.

**Dates:** May 1971—November 1978.

**Objective:** To provide awareness of one's own managerial behavior, effects of that behavior on the organization, and the exploration of alternative personal relationship strategies.

**Instruction:** Dynamics of organizational change; analysis of organizational problems and improvement strategies; intercultural issues in a multi-national organization. Examination of member behavior in an ongoing team; power and influence in a group; analyzing and improving team performance in problem-solving situations. Two-way communications; sensitivity to feelings; giving and receiving feedback; applications of motivation theory. Personal perceptions, roles, values and attitudes; goal and career/life planning; practice in developing helping/consultative relationships. Teaching method is primarily experiential, including individual consultation with the instructional staff.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Behavorial Sciences/Interpersonal Skills Development (5/77).

# NASSAU COUNTY DEPARTMENT OF DRUG AND ALCOHOL ADDICTION

The Nassau County Department of Drug and Alcohol Addiction serves county residents who abuse alcohol and other drugs or who are potential abusers, and those who are members of their families. The Department is the official "Designate" of the State Office of Substance Abuse Services in Nassau County. As part of its countywide network of comprehensive services, the Department offers a variety of treatment services and also allocates funds to local hospitals, clinics, community groups, and schools which provide prevention and treatment services.

The Staff Development and Training Unit is responsible for the development and implementation of training programs in areas of prevention and treatment for Department staff as well as for staff and board members of the agencies funded by the Department.

Source of official student records: Office of Staff Development and Training, Nassau County Department of Drug and Alcohol Addiction, 175 Fulton Avenue, Hempstead, New York 11550.

## Principles of Counseling

**Location:** Roosevelt Counseling Center, 42 East Fulton Avenue, Roosevelt, NY.

**Length:** 30 hours (15 weeks).

**Dates:** November 1972—June 1981.

**Objective:** To familiarize the student with some basic interviewing skills.

**Instruction:** Various components of the interview are examined, including psychosocial consideration, resistances encountered, and the use of some diagnostic methodologies in both group and individual work. Emphasis is on the didactic and experiential levels.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Behavioral Sciences, Counseling, or Psychology (2/76).

240

# NASSAU COUNTY POLICE DEPARTMENT

The Nassau County Police Department serves a population of approximately 1.5 million people in Nassau County, which is located on Long Island immediately adjacent to New York City. The Department employs 4,775 persons, and its headquarters is in Mineola, New York.

## RECRUIT TRAINING PROGRAM

The courses listed below constitute the academic component of the Recruit Training Program conducted by the Nassau County Police Department. This is an intensive 16-week program attended by all newly appointed officers of the Department. All courses are taught at the Police Training Center of the Department.

Source of official student records: Commanding Officer, College Education Bureau, Nassau County Police Department, 1490 Franklin Avenue, Mineola, New York 11501.

### Community Relations

**Location:** Police Training Center, Mineola, NY.
**Length:** **Version 1:** 42 hours.
**Version 2:** 82½ hours.
**Version 3:** 45 hours.
**Dates:** **Version 1:** January 1968—December 1969.
**Version 2:** January 1970—December 1971.
**Version 3:** January 1972—June 1981.

**Objective:** To present the student with a study of the practical applications of the principles of social science as they relate to the field of police/community relations.

**Instruction:** A survey of psychological and sociological factors affecting human behavior. Human behavior as manifested by the juvenile offender, the mentally ill, the alcohol and drug abuser, and other normal/abnormal behavior typologies. The course is from the police perspective, growing out of the dynamic relationship known as police/community relations.

**Credit recommendation: Versions 1 and 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Criminal Justice or Criminology (10/75). **Version 3:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Criminal Justice or Criminology (1/75).

### Criminal Investigation

**Location:** Police Training Center, Mineola, NY.
**Length:** **Version 1:** 44 hours.
**Version 2:** 50 hours.
**Version 3:** 45 hours.
**Version 4:** 52 hours.
**Version 5:** 41 hours.
**Dates:** **Version 1:** January 1965—December 1965.
**Version 2:** January 1966—December 1967.
**Version 3:** January 1968—December 1969.
**Version 4:** January 1970—December 1971.
**Version 5:** January 1972—June 1981.

**Objective:** To acquaint the student with the basic principles of criminal investigation.

**Instruction:** An examination of the skills and techniques needed to conduct sound police investigations with emphasis on Supreme Court guidelines. Preliminary investigations; interviews; interrogations; collection and preservation of physical evidence; consideration of criminal activities requiring specialized investigatory procedures.

**Credit recommendation: Versions 1-4:** In the lower division baccalaureate/associate degree category, 3 semester hours in Criminal Justice (10/75). **Version 5:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Criminal Justice (1/75).

### Criminal Law and Procedure

**Location:** Police Training Center, Mineola, NY.
**Length:** **Version 1:** 81 hours.
**Version 2:** 91 hours.
**Version 3:** 70 hours.
**Version 4:** 107 hours.
**Version 5:** 56 hours.
**Dates:** **Version 1:** January 1965—December 1965.
**Version 2:** January 1966—December 1967.
**Version 3:** January 1968—December 1969.
**Version 4:** January 1970—December 1971.
**Version 5:** January 1972—June 1981.

**Objective:** To provide the student with an understanding of the basic elements of criminal law and procedure.

**Instruction: Versions 1-3:** The New York criminal procedure law and penal law with emphasis on serious crimes and offenses (homicide, assault, arson, conspiracy, and robbery). **Versions 4 and 5:** The United State Constitution; the New York criminal procedure law; penal law; the Family Court Act. Emphasis is on serious crimes (homicide, assault, arson, conspiracy, robbery, and juvenile offenses).

**Credit recommendation: Versions 1-4:** In the lower division baccalaureate/associate degree category, 4 semester hours in Criminal Justice, Criminology, or Government (10/75). **Version 5:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Criminal Justice, Criminology, or Government (1/75).

## Introduction to Law Enforcement

**Location:** Police Training Center, Mineola, NY.

**Length: Version 1:** 45½ hours.
**Version 2:** 37½ hours.
**Version 3:** 87 hours.
**Version 4:** 69½ hours.
**Version 5:** 52 hours.

**Dates: Version 1:** January 1965—December 1965.
**Version 2:** January 1966—December 1967.
**Version 3:** January 1968—December 1969.
**Version 4:** January 1970—December 1971.
**Version 5:** January 1972—June 1981.

**Objective:** To present the student with an introduction to law enforcement and its role within society and the criminal justice system.

**Instruction: Versions 1-3:** An examination of the philosophy, responsibilities, and objectives of law enforcement considered against a background of the variety, extent, and nature of crime in the United States. Law enforcement ethics; professionalism; conduct and standards for police; police organization; jurisdiction; the role of certain social agencies as they articulate with the police. **Versions 4 and 5:** An examination of the history, philosophy, responsibilities, and objectives of law enforcement considered against a background of the variety, extent, and nature of crime in the United States. Law enforcement ethics; professionalism; conduct and standards for police; police organization; jurisdiction; the role of the correctional system and certain social agencies as they articulate with the police.

**Credit recommendation: Versions 1-5:** In the lower division baccalaureate/associate degree category, 3 semester hours in Criminal Justice (1/75).

## Physical Education

**Part 1: Foundations of Physical Activity**
**Part 2: Self-Defense**
**Part 3: Accident Prevention, First Aid, and Safety Education**

**Location:** Police Training Center, Mineola, NY.

**Length:** 90 hours; each part 30 hours.

**Dates: Part 1:** January 1968—June 1981.
**Part 2:** January 1965—June 1981.
**Part 3:** January 1965—June 1981.

**Objective:** To prepare the student for the physiological and psychological demands involved in the work of a police officer.

**Instruction: Part 1:** Instruction and practice in movement skills, body mechanics, and developmental activities to attain a level of physical fitness; methods of maintaining and improving physical fitness. **Part 2:** Theory, skills, and practice of judo, karate, and aikido; boxing and wrestling techniques; fundamentals and principles of those arts; application of those arts to combative situations. **Part 3:** Principles of accident prevention; theory and practice of first aid procedures to accident victims (shock, wounds, methods of resuscitation, sudden illnesses, emergency childbirth). Recruits receive certification by the American Red Cross.

**Credit recommendation: Part 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Physical Education (1/75). **Part 2:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Physical Education (10/75). **Part 3:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Physical Education (10/75).

## Police Operations

**Location:** Police Training Center, Mineola, NY.

**Length: Version 1:** 56 hours; practicum of 81 hours.
**Version 2:** 68 hours; practicum of 82 hours.

**Dates: Version 1:** January 1970—December 1971.
**Version 2:** January 1972—June 1981.

**Objective:** To acquaint the student with the multidimensional aspects of basic police operations.

**Instruction:** An examination of patrol duties. The officer's role in handling crimes in progress; field notetaking; missing persons; bombs and bomb threats; crowd and riot control; arrest procedures; other situations faced by the patrol officer. Role playing and a practicum (Supervised Field Training) are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Criminal Justice (3 lecture, 1 Supervised Field Training) (1/75).

# NATIONAL AUDUBON SOCIETY

**The National Audubon Society, one of America's largest and most distinguished conservation organizations, was founded in 1905. Its primary objectives are the long-term protection of all life and the preservation or our natural resources.**

## INSTITUTE FOR EXPEDITION EDUCATION

The Institute for Expedition Education operates a travel-camping school for the National Audubon Society. Its purpose is to experientially teach the competencies and attitudes necessary to carry out the Audubon mission. The school provides a unique program of graduate, undergraduate, and high school course work which is available to the public regardless of an individual's race, religion, or national origin.

The school's one- to three-year course of study is in its twelfth year of operation and its third year of affiliation with the National Audubon Society. It is guided by Master's- and Doctorate-level adjunct faculty of the Lesley College Graduate School in Cambridge, Massachusetts. One or more years are accepted as partial fulfillment of requirements for B.S. or M.S. degrees at Lesley College and at other colleges and universities.

The Institute utilizes a wealth of environments and resources as classrooms and teachers: New England forests, mountains, and shores; Florida Everglades and river systems; Rocky Mountain wilderness areas; Southwestern deserts; the Pacific Northwest; Amish farm communities; Audubon sanctuaries, centers, and political action offices; native American communities; reference libraries; national parks; museums; archeological sites; conservation associations; observatories; more than 100 guides, experts, and specialists; and a 15-member advisory board of leading educators and conservation personnel.

The expedition's hands-on learning teaches participants the academics of the natural and social sciences, traditional music and art, education, mental hygiene, and many levels of outdoor recreation and survival. Participants attain practical competencies in crafts, nutrition, ecology, conservation, energy use, value clarification, critical thinking, and relationships with other people. There are lengthy periods of independent study, as well as opportunities for research reports and internships.

Source of official student records: Audubon Expedition Institute, National Audubon Society, 950 Third Avenue, New York, New York 10022.

### Anglo-American Traditional Music and Dance

**(Formerly American Traditional Music, Dance, and Folklore)**

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1972—Present.

**Objective:** To familiarize students with various aspects of traditional Anglo-American music and dance so that they may become more self-sufficient in personal or group recreational activities.

**Instruction:** Songs and dances of Anglo-American communities; songs and social history; visits to regional folk specialists and musicians (revival and traditional).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Folklore (7/80).

### Anthropology: A Comparison of Subcultures in the United States

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1979—Present.

**Objective:** To provide students with experiences which will enable them to understand American subcultures and the ways in which those subcultures affect the lives of their members.

**Instruction:** Field work methods; concepts of culture; ethnography of various subcultures; cultural change.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Anthropology (7/80).

### Applied Human Ecology: An Introduction to Expedition Education

**(Formerly Applied Human Ecology)**

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 45 hours (3 weeks).

**Dates:** September 1980—Present.

**Objective:** To provide students with the opportunity to gain vital ecological knowledge as they are confronted by the many levels of the problem of survival which exist within humanity and the natural world as it is encountered on an educational expedition.

**Instruction:** The nature of humanity, the social environment, the natural world, and the built environment; the development of an ecologically sound community; values within the wilderness; concept of conservation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Education (7/80).

### Appropriate Technology and Self-Sufficiency

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 19 hours (25 weeks).

**Dates:** September 1980—Present.

**Objective:** To provide students with a survey of the concepts and practice of appropriate technology as applied to living and working in modern day America, and to teach students the skills necessary for implementing a low-impact lifestyle.

**Instruction:** General concepts of appropriate technology (home design and construction, alternative energy sources, waste removal); nutrition; traditional crafts; case studies of integrated self-sufficient systems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Environmental Science (7/80).

### Concepts and Processes in Education

**(Formerly Philosophy of Education)**

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 38 hours (25 weeks).

**Dates:** September 1975—Present.

**Objective:** To provide students with the background and opportunity to discuss the basic issue of public education and to question where and how education should occur.

**Instruction:** The role and nature of education; effects of specific environments upon education; types of educational programs.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Education (7/80).

### Cultural Perspectives of Human Communities

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide students with archaeological and cultural experiences in order to provoke questions about the definition and parameters of culture.

**Instruction:** Basic concepts in cultural anthropology; methods of archaeological excavation and correlation of data; field study of four different types of cultural communities (prehistoric, native American, Utopian religious, and industrial).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Anthropology (7/80).

### The Development of America: Its People, Values, and Institutions

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide students with a survey of the historical role humans have taken in changing their environment; to examine the reciprocal effect of changing American social settings on people's outlooks and reactions from pre-Colonial times to the present; to provoke questions as to the authenticity, interpretation, and significance of historical data.

**Instruction:** Study of the major periods of American history; visits to numerous sites and museums with extensive access to curators and specialists; examination of the present day in a historical context.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in American History (7/80).

### 1. English as a Means of Self-Expression
### 2. Practicum in Communication

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 1. 75 hours (25 weeks).
2. 75 hours (25 weeks).

**Dates:** 1. September 1972—Present.
2. September 1979—Present.

**Objective:** To provide students with an opportunity to develop skills in effective oral and written communication of thoughts and feelings.

**Instruction:** Communication of thoughts, ideas, and individual research through critical essays, and expository and creative writing; fundamentals of public speaking; basic principles of written and verbal communication (clarity, grammar, content, organization, and style). Readings of works by American authors, with emphasis on the subjects of conservation, natural history, and ecology. The increased ability to express oneself orally, together with the incorporation of new and varied material into one's writing is emphasized.

**Credit recommendation: Course 1:** In the lower division baccalaureate/associate degree category, 2 semester hours in English. **Course 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in English (7/80).

## The Environment: Its Impact on Personal and Social Relationships

**(Formerly Environmental Psychology)**

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1979—Present.

**Objective:** To enable students to develop an awareness of, and a language for, the articulation of their personal relationships with the natural and social environment, and to use these skills to alter their perceptions and behavior with the purpose of increasing their effectiveness as environmentalists.

**Instruction:** Scope and definition of the concept of the environment; applied environmental psychology; effects of the social and natural environment upon personality, perception, and behavior; the built environment; politics, control, and manipulation of the natural and social environment.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Psychology or Sociology (7/80).

## Environmental Geoscience

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1979—Present.

**Objective:** To enable students to understand the use and application of geological principles in the conservation and maintenance of the inhabited natural environment.

**Instruction:** Biogeochemical cycles; finite limitation of earth materials; catastrophic processes; land use and decision making.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Environmental Science (7/80).

## The Geology of America's Public Lands

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1979—Present.

**Objective:** To enable students to examine the geological features found in the areas preserved by Federal and state agencies, with emphasis on processes of formation and evolution and philosophies involved in their preservation.

**Instruction:** Philosophy of the preservation of public lands; geological processes and features of major geographical provinces within the continental United States.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Geology (7/80).

## Geology of the Pacific Northwest

**Locations:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 15 hours (4 weeks).

**Dates:** July 1979—Present.

**Objective:** To provide students with a general survey of the geology of the Pacific Northwest in order to interpret geological processes and to understand their impact on local lifestyles and ecosystems.

**Instruction:** Major northwest geological processes; local climatically controlled geological processes; identification and formation of local geological and ecological processes.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Geology (7/80).

## Introduction to Astronomy

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 19 hours (25 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide students with a general survey of astronomical methods and phenomena in order to provoke questions, observations, and thoughts concerning the makeup, function, and evolution of the universe.

**Instruction:** The earth in space; field observation; terrestrial navigation; tools of the astronomer; cosmology; components of the universe, stellar evolution.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Astronomy (7/80).

## Introduction to Geological Principles

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide students with an introduction to physical, historical, and environmental geology.

**Instruction:** Ancient and modern interpretation of nature; basic geologic concepts; igneous rocks; sedimentary rocks; metamorphic rocks; structural geology; volcanism; earth history; erosion; weathering; rivers; ground water; glaciation; shoreline development; earthquakes; continental drift; plate tectonics; fossil fuels; mineral resources; environmental geology. The ability to visualize and conceptualize geological processes and principles which have shaped the earth is emphasized.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Geology (7/80).

### Methods, Materials, and Resources in: (Advanced Courses in Institute Subject Areas)

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 300 hours (25 weeks).

**Dates:** September 1980—Present.

**Objective:** To provide students with leadership, research, and teaching experience which may be used in outdoor and environmental educational settings.

**Instruction:** Research into, and evaluation and extension of, the syllabus and curriculum within a special subject area covered by the Expedition Institute; techniques in the communication of the expedition experience and education; internship and assistantship opportunities; public relations in environmental education programs. (Prerequisite: Advanced training in the subject area, other than experience gained in the AEI expedition.)

**Credit recommendation:** In the upper division baccalaureate category, 12 semester hours in Education (7/80).

### Mountain, Desert, and Human Ecology of the Southern Rocky Mountains and Colorado Plateau

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 45 hours (4 weeks).

**Dates:** August 1980—Present.

**Objective:** To provide students with a general survey of the geology, botany, and natural and human ecology of the southern Rocky Mountains and the Colorado Plateau.

**Instruction:** Ecology of the southern Rocky Mountain region; ecology of the Colorado Plateau.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Ecology (7/80).

### Natural History of the Pacific Northwest

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 30 hours (4 weeks).

**Dates:** July 1979—Present.

**Objective:** To provide students with a general survey of the natural history of the coastal and mountain regions of the Pacific Northwest.

**Instruction:** Regional physical characteristics of the Pacific Northwest; weather patterns and climatic processes; biological components; observation and identification techniques; man's impact on the region.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Natural History (7/80).

### New England Folklore

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 57 hours (25 weeks).

**Dates:** September 1979—Present.

**Objective:** To provide students with knowledge of New England's Anglo-American communities in order to develop an understanding of the function of folk traditions in New England culture and history.

**Instruction:** Introduction to the study and collection of folklore; New England regional social history; role of traditional dance and song in Anglo-American New England communities; songs and dances of historical New England; study of last vestiges of 19th century New England coastal lifestyle.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Folklore (7/80).

### An Overview of Natural History and Ecological Theory

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide students with a general survey of the major biomes, ecosystems, and microsystems which comprise the continental United States.

**Instruction:** Environmental determinants; environmental adaptations; ecosystems; field investigations of major biomes and life zones; ecosystem disruption; paleoecology; faunal and floral study methods; consequences of habitat and species destruction.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Ecology (7/80).

## Perspectives in Environmental Education

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 57 hours (25 weeks).

**Dates:** September 1979—Present.

**Objective:** To immerse students in an environmental expedition in order to gain an understanding of expedition education and its long-term effects, while comparing and contrasting this with other existing environmental education programs.

**Instruction:** The rationale behind environmental education; the development of alternatives in an expedition community; comparison of varying techniques in the field of environmental education.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Education (7/80).

## Physical Education

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 19 hours (25 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide students with expertise, physical skills, and stamina in a variety of outdoor settings.

**Instruction:** Conditioning for outdoor activities; hiking; cross-country skiing; canoeing; skin diving; spelunking; traditional American games; ancillary physical activities.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Physical Education (7/80).

## Physical Education: Camp and Outdoor Education

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 19 hours (25 weeks).

**Dates:** September 1979—Present.

**Objective:** To give students experience in the practice, philosophy, and teaching of camping and outdoor survival techniques.

**Instruction:** Fundamentals of outdoorsmanship; philosophy of outdoor education; outdoor education areas (state and national park systems).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Physical Education (7/80)

## Practicum in Communication

Refer to English as a Means of Self-Expression.

## Practicum in Group Dynamics

**(Formerly The Psychology of Personality and Group Dynamics)**

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide students with in-depth encounters with other individuals and their social settings in order to provoke questions, observations, and experiences leading to the greater comfort and emotional maturity of the individual student.

**Instruction:** Parameters of an expedition community; the development of social behavior; the development of self, language, and communication; attitude change; conformity and nonconformity; formation and interaction of groups; person perception and attribution; leadership.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Social Psychology (7/80).

## Salt and Fresh Water Ecology

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 75 hours (25 weeks).

**Dates:** September 1979—Present.

**Objective:** To provide students with an overall understanding of fresh and salt water ecosystems, the processes which function within them, and the impact of human activities upon those ecosystems.

**Instruction:** Exploration into various marine, estuarine, and fresh water ecosystems, with emphasis on both biological and physical processes characteristic of these systems. Major topics studied include: natural factors affecting aquatic systems; aquatic organisms; human impact on aquatic ecosystems; methods of studying aquatic environments; comparison of different aquatic systems.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Ecology (7/80).

## Special Topics in Ecology: Ornithology

**Location:** En route as the students travel throughout the United States with the Audubon Expedition Institute.

**Length:** 19 hours (25 weeks).

**Dates:** September 1980—Present.

**Objective:** To enable students to identify bird species in areas visited; to provide students with an understanding of bird behavior and habitat in the continental United States.

**Instruction:** Identification of species; bird migration and instinct; avian ecology; problems of habitat; evolution; protection and laws; history of ornithology in America.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Ecology (7/80).

# NATIONAL JOINT APPRENTICESHIP AND TRAINING COMMITTEE FOR THE ELECTRICAL INDUSTRY

The National Electrical Course for Apprentice Inside Wiremen has been developed by the National Joint Apprenticeship and Training Committee for the Electrical Industry. This committee, whose office is located in Lanham, Maryland, is jointly sponsored by the International Brotherhood of Electrical Workers (I.B.E.W.) and the National Electrical Contractors Association, Inc. (NECA).

Inside wiremen are responsible for the installation of all wires, busses, conduits, switches, converters, transformers, electric motors, and other electrical apparatus of a stationary nature. On construction work in the United States and Canada they install electrical systems in residential, commercial, and industrial buildings. In the missile and space programs they install the complex systems that guide missiles and submarines.

The National Committee updates the national curriculum for the four-year program on a regular basis. It also provides instructors' guides, student workbooks, resource materials, standard application and rating forms, and examinations to every local Joint Apprenticeship and Training Committee (JATC) throughout the country. Each JATC is responsible for administering the national curriculum and maintaining the quality of instruction in accord with the national standards. When an apprentice successfully completes the four-year program combining classroom instruction with supervised on-the-job training, he/she is certified as a journeyman electrician.

During the evaluation of the National Course it was determined that the JATC's located in the areas listed below after "Location" conduct the course according to the national standards and with satisfactory quality controls. When a postsecondary institution is considering awarding credit to persons who have completed the National Course under a JATC in another location, it should first request the following information from that JATC. (1) What is the selection procedure for apprentices? Does it follow the national admission requirements of a high school diploma and one year of high school algebra? (2) Does it use the national curriculum and the national examinations? (3) What grading system does it follow? What is the passing grade? What are its criteria for retention in the apprenticeship program? (4) What rating and recordkeeping system is followed for the on-the-job training component? (5) What are its qualifications for instructors, in terms of work experience and education, to insure that they are adequately prepared to teach the subject matter? What is the normal class size? (6) Can it supply an official record of a person's successful completion of the National Course?

Source of official student records: Administrator of the apprenticeship program in the area or (where applicable) the Business Manager of the I.B.E.W. Local in the area.

## National Electrical Course for Apprentice Inside Wiremen

**Location:** Dunkirk, NY (Local 593 merged with Jamestown, NY (Local 106) on February 1, 1979; Ellenville, NY (Local 806); Flushing, NY (Local 3)*; Geneva, NY (Local 840); Jamestown, NY (Local 106); Newburgh, NY (Local 631); New City, NY (Local 363); Niagara Falls, NY (Local 237); Oswego, NY (Local 328); Plattsburgh, NY (Local 781); Poughkeepsie, NY (Local 215); Rochester, NY (Local 86); Schenectady, NY (Local 166); Syracuse, NY (Local 43); Utica, NY (Local 181); Watertown, NY (Local 910).

**Length:** Classroom Instruction—576 hours. On-the-Job Training—minimum of 7,000 hours.

**Dates:** January 1969—June 1981.

**Objective:** To provide apprentices with the knowledge and skills needed to qualify them as journeymen electricians.

**Instruction: Classroom**—Applied mathematics; basic DC and AC (including 3-phase) circuits; blueprint reading; principles of transformers, motors, and generators; motor controls; basic electronics and power supplies; safety considerations; standard trade practices; national electrical code. Lectures and demonstrations are used. **On-the-Job Training**—Development of skills in the use of hand tools; instruction and practice in the installation of signal wiring systems; residential, commercial, and industrial wiring for light and power; installation and maintenance of transformers, motors, generators, and controls.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 32 semester hours in Electrical Construction (16 lecture, 16 shop) (3/78).

---

*Journeymen electricians who have completed the four-year National Electrical Course for Apprentice Inside Wiremen at Local Union 3 are required to take an additional year of coursework. See page 202 for the description and credit recommendation for this year-long course of study.

# NEW ROCHELLE HOSPITAL MEDICAL CENTER

New Rochelle Hospital Medical Center is a voluntary nonprofit hospital in New Rochelle, New York. The hospital provides a full range of medical services, including inpatient services for 500 and a modern extended care pavilion. The Center is staffed by more than 1,300 employees including 225 physicians and dentists.

In January 1976, the Management and Personnel Development Institute was established by the Center to provide centralized educational service to hospitals and health care facilities in Westchester and Putnam counties, New York City, Long Island, and Connecticut. Courses and programs are conducted at the Medical Center and at individual requesting hospitals in a variety of subject areas, including patient care support services, labor relations, human relations, organizational development, management skills, and problem solving.

Source of official student records: Director, Management and Personnel Development Institute, New Rochelle Hospital Medical Center, 16 Guion Place, New Rochelle, New York 10802.

## Motivational Dynamics

**Location:** New Rochelle Hospital Medical Center, 16 Guion Place, New Rochelle, NY; Good Samaritan Hospital, 1000 Montauk Highway, West Islip, NY.

**Length:** 36 hours (12 weeks).

**Dates:** January 1976—July 1977.

**Objective:** To improve the effectiveness of upper level management personnel through increased knowledge of management practices and the behavioral sciences and their application on the job.

**Instruction:** Overview of motivational theory (McGregor, Freud, Maslow, and Herzberg); group dynamics; productivity and the maintenance of morale; effective supervision; particpative management; the change process; the communication process; management by objectives; organizational development. The course includes lectures, discussion, video presentations, role plays, case studies, and in-basket exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Behavioral Science or Management (8/76).

# NEW YORK BOTANICAL GARDEN

The New York Botanical Garden was incorporated on April 28, 1891, for the purposes of establishing and maintaining a botanical garden, museum, and arboretum; the collection and culture of plants; the advancement of botanical science and original research; education in botany and horticulture; the exhibition of ornamental plants; and for recreational use. During its 90-year history the Garden has been a nationally and internationally recognized research center and resource of major importance to the plant sciences. Living plant collections are maintained in the Enid A. Haupt Conservatory, and the Herbarium contains a collection of over four million dried plants. The Garden's botanical/horticultural library is the largest in the United States and serves the Garden, professionals, and the general public. The aim of the Garden's Education Department is to interest and instruct the general public in all aspects of plant life.

## EDUCATION PROGRAM

Through the Education Program, the Garden offers more than 350 courses each year. Within the instructional program, major programs of study are offered in botany, gardening, landscape design, commercial flower arranging and floriculture, interior plantscaping, horticultural therapy, nature photography, and arboriculture. In order to complete a program and receive a certificate, students must complete a prescribed curriculum.

Source of official student records: Registrar, The New York Botanical Garden, Bronx, New York 10458.

### Basic Botany

Refer to General Botany.

### Cellular and Molecular Botany
### 1. Molecular Biology: DNA, RNA, Protein
### 2. Plant Cytology and Cytogenetics
### 3. Plant Membrane Biology

**Location:** New York Botanical Garden, Bronx, NY

**Length:** 1. 16 hours (8 weeks).
2. 12 hours (8 weeks).
3. 12 hours (8 weeks).

**Dates:** 1. September 1979—Present.
2. September 1978—Present.
3. September 1978—Present.

**Objective:** To provide participants with a knowledge of the morphology, physiology, reproduction, and development of plants at the cellular/molecular level.

**Instruction:** Physiological and biochemical basis of membrane structure and function; detailed study of DNA; cell theory; cell organelles; methods of studying the cell; nuclei and chromosomes; mitotic and meiotic cycles; chromosomes and plant breeding; chromosomes and evolution. (Prerequisite for Course 1: One year of college-level organic chemistry. Prerequisite for Courses 1 and 2: Basic Botany. Prerequisite for Course 3: Plant Physiology or the equivalent.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Cellular Biology (1/79). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Commercial Greenhouse Management

Refer to Nursery and Greenhouse Management.

### Cryptogamic Botany

Refer to Plant Morphology and Taxonomy.

### Developmental Botany
### 1. Microtechnique
### 2. Plant Cell, Tissue, and Organ Culture
### 3. Plant Development

**Location:** New York Botanical Garden, Bronx, NY.

**Length:** 1. 12 hours (6 weeks).
2. 16 hours (8 weeks).
3. 12 hours (6 weeks).

**Dates:** 1. January 1978—Present.
2. September 1978—Present.
3. April 1978—Present.

**Objective:** To acquaint participants with the developmental sequence of events in angiosperms, and the techniques by which plant materials are prepared for microscopic analysis.

**Instruction:** Alternation of phases; mitosis and meiosis; flower structure and development; reproductive cycle, microsporogenesis, megagametogenesis; seed structure and development; fruits; embryogenesis; patterns of germination; differentiation, specialization, and morphogenesis; selection of explants; surface sterilization; autoclaving; types of cultures; cloning; chromosomal cytology; induced morphogenesis and differentiation; *in vitro* pollination; test tube fertilization; disease-free material; haploid plants; secondary metabolites; plant protoplasts; somatic hybridization; genetic engineering; fixation; embedding; sectioning; staining; pollen and spore preparation. (Prerequisite for Courses 1, 2, and 3: Basic Botany.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Botany (1/79). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Entomology

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 16 hours (8 weeks).
**Dates:** April 1978—Present.

**Objective:** To give participants a basic understanding of the classification, structure, growth, development, harmful and beneficial effects, and control of insects and related anthropod forms.

**Instruction:** Definition of an insect; classification and identification of insects and anthropods; harmful and beneficial effects of insects; external characteristics; types of mouthparts and their adaptations; types of metamorphosis; insect damage to plants; pest control.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Entomology (1/79).

### Environmental Botany

Refer to Plant Ecology.

### Evolutionary Biology

Refer to Genetics and Evolution.

### Field Botany

### 1. Field Botany (Cryptogams)

### 2. Field Botany (Phanerogams)

**(Formerly Local Flora in Spring [Phanerogams])**

### 3. Plant Ecology

**(Formerly Natural Vegetation [Ecology])**

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 1. 12 hours (8 weeks).
2. 12 hours (8 weeks).
3. 12 hours (8 weeks).
**Dates:** September 1975—Present.

**Objective:** To provide the student with a study of plants in relation to their environment.

**Instruction:** Study of the ecosystem and primary production; description and classification of vegetation; vegetation dynamics; environmental gradient and plant distribution; forest types; history of local vegetation. Field trips are conducted to study local vegetation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Ecology or Field Botany (9/75).

### Field Botany (Cryptogams)

Refer to Field Botany.

### Field Botany (Phanerogams)

Refer to Field Botany.

### Field Studies

### 1. Local Flora in Autumn and Spring

### 2. Natural History of the Bronx River Valley

### 3. Winter Botany

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 1. 16 hours (8 weeks).
2. 12 hours (6 weeks).
3. 12 hours (6 weeks).
**Dates:** 1. April 1978—Present.
2. September 1977—Present.
3. January 1971—Present.

**Objective:** To enable participants to identify local flora by their morphological characteristics, and to become familiar with the Bronx River Valley.

**Instruction:** Ecology of herbaceous plants, shrubs, and vines; economic botany of vines and shrubs; trees and hardwood twigs; fruits, bark, buds, seeds, roots, rhizomes, bulbs, galls, and remnants; Bronx River Valley (geography and geology, history and hydrology, forest fauna and flora, flood plain ecology, open fields and lake ecology, ecological problems). (Prerequisite for Courses 1 and 3: Basic Botany.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Botany (1/79). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Fruit and Vegetable Gardening

Refer to Home Landscaping and Garden Maintenance.

### Gardening Practice

### 1. Plant Propagation and Grafting

### 2. Soil Science

### 3. Soil Testing

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 1. 12 hours (8 weeks).
2. 12 hours (6 weeks).
3. 8 hours (4 weeks).
**Dates:** 1. January 1979—Present.
2. January 1977—Present.
3. April 1979—Present.

**Objective:** To provide participants with a knowledge of soil types, soil testing procedures, and accepted plant propagation and grafting techniques.

**Instruction:** Soil formation, soil profiles, and soil water; physical properties of soil; soil modification for successful plant growth; testing procedures to maintain adequate nutrient levels in the soil; seed germination; propagation by hardwood and softwood cuttings; grafting; air and soil layering; division of established plants; propagation of ferns from spores.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Horticulture (1/79). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

## General Botany
### 1. Basic Botany
### 2. Plant Form and Function
### 3. Plant Physiology

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 1. 15 hours (10 weeks).
2. 12 hours (8 weeks).
3. 12 hours (8 weeks).
**Dates:** September 1975—Present.

**Objective:** To provide a study of the morphology and physiology of seed plants.

**Instruction:** Plant anatomy and physiology; genetics; diversity and systematics; nutrition; growth and development.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in General Botany (9/75).

## General Genetics

Refer to Genetics and Evolution.

## Genetics and Evolution
### 1. Evolutionary Biology
### 2. General Genetics
### 3. Paleobotany

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 1. 12 hours (8 weeks).
2. 12 hours (8 weeks).
3. 12 hours (8 weeks).
**Dates:** September 1975—Present.

**Objective:** To provide an introduction to Mendelian and non-Mendelian gene inheritance patterns; to provide a study of the theoretical and factual aspects of the fossil record and evolution, particularly of plants.

**Instruction:** Mechanisms of evolution; paleoecology; morphological and physiological trends in the fossil record; techniques of paleochemotaxonomy, geochemistry, and computer analysis as applied to historical biology; plant genetics (Medelian and non-Mendelian).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Genetics and Evolution (9/75).

## Home Landscaping and Garden Maintenance
### 1. Fruit and Vegetable Gardening
**(Formerly Vegetable Gardening)**
### 2. Plant Pests and Diseases
### 3. Plants for Landscaping
**(Formerly Plants for Landscaping Your Home)**
### 4. Turf and Grounds Maintenance
**(Formerly Lawns and Grounds Maintenance)**

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 1. 12 hours (8 weeks).
2. 12 hours (6 weeks).
3. 12 hours (8 weeks).
4. 12 hours (8 weeks).
**Dates:** September 1975—Present.

**Objective:** To provide instruction in landscaping the home and maintaining the plant material used.

**Instruction:** Basic design principles; foundation plantings; use of flowers in the design; planting; pruning; fertilizing; care of the plant material used in the design; insects and plant diseases. Instruction in vegetable gardening is also included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Home Landscaping (1 lecture, 1 laboratory) (9/75).

## Horticultural Taxonomy

Refer to Taxonomy of Spermatophytes.

## Horticulture Business Management

Refer to Nursery and Greenhouse Management.

## Lawns and Grounds Maintenance.

Refer to Home Landscaping and Garden Maintenance.

## Local Flora in Autumn and Spring

Refer to Field Studies.

## Local Flora in Spring (Phanerogams)

Refer to Field Botany.

## Microtechnique

Refer to Developmental Botany.

## Molecular Biology: DNA, RNA, Protein

Refer to Cellular and Molecular Botany.

## Morphology of Flowering Plants

Refer to Plant Morphology and Taxonomy.

## Natural History of the Bronx River Valley

Refer to Field Studies.

## Natural Vegetation (Ecology)

Refer to Field Botany.

## Nursery and Greenhouse Management
### 1. Commercial Greenhouse Management
### 2. Horticulture Business Management

### 3. Nursery Management

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 1. 12 hours (6 weeks).
2. 16 hours (8 weeks).
3. 12 hours (6 weeks).
**Dates:** 1. April 1977—Present.
2. April 1978—Present.
3. January 1977—Present.

**Objective:** To provide participants with a knowledge of the production of greenhouse and nursery crops, and the business management needed to produce these crops economically.

**Instruction:** Site selection, arrangement, and layout; space utilization and commercial success; environmental controls; sanitation; soil mixes; plant propagation and development; production schedules; timed holiday crops; pitfalls of commercial greenhouse operations; growing nursery stock in the field and in containers; marketing; cash flow; assets; credits; inventory; equipment; taxes; advertising; public relations; insurance; clients.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Horticulture (1/79). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Nursery Management

Refer to Nursery and Greenhouse Management.

### Paleobotany

Refer to Genetics and Evolution.

### Physiological Plant Ecology

Refer to Plant Ecology.

### Plant Cell, Tissue, and Organ Culture

Refer to Developmental Botany.

### Plant Cytology and Cytogenetics

Refer to Cellular and Molecular Botany.

### Plant Development

Refer to Developmental Botany.

### Plant Ecology
### 1. Environmental Botany
### 2. Physiological Plant Ecology

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 1. 12 hours (8 weeks).
2. 12 hours (8 weeks).
**Dates:** 1. September 1976—Present.
2. September 1977—Present.

**Objective:** To acquaint participants with the stresses to which plants are subjected, and the physiological adjustments and adaptations which they make to their environment in different types of ecosystems.

**Instruction:** How plants function in various climates; photosynthesis; respiration; water relations; dormancy; mineral nutrition; effects of pollutants on the physiological processes of plants; technical ecology; environmental and biotic stresses; climate and soil fertility; plant communities; succession, and allelopathy; air and water pollutants; eutrophication. (Prerequisite for Courses 1 and 2: Basic Botany.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Botany (1/79). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Plant Form and Function

Refer to General Botany.

### Plant Hybridization

Refer to Taxonomy of Spermatophytes.

### Plant Membrane Biology

Refer to Cellular and Molecular Botany.

### Plant Morphology and Taxonomy
### 1. Cryptogamic Botany
### 2. Morphology of Flowering Plants
### 3. Systematic Botany

**Location:** New York Botanical Garden, Bronx, NY.
**Length:** 1. 12 hours (8 weeks).
2. 20 hours (9 weeks).
3. 12 hours (8 weeks).
**Dates:** September 1975—Present.

**Objective:** To provide the student with a study of the morphology and taxonomy of flowering plants.

**Instruction:** Survey of cryptogamic plants; evolutionary significance of plant parts in terms of its application to the classification of flowering plants; structure of flowers; plant identification and classification.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Plant Morphology and Taxonomy (9/75).

### Plant Pests and Diseases

Refer to Home Landscaping and Garden Maintenance.

### Plant Physiology

Refer to General Botany.

### Plant Propagation and Grafting

Refer to Gardening Practice.

### Plants for Landscaping

Refer to Home Landscaping and Garden Maintenance.

## Plants for Landscaping Your Home

Refer to Home Landscaping and Garden Maintenance.

## Pollen and Spores

Refer to Taxonomy of Spermatophytes.

## Soil Science

Refer to Gardening Practice.

## Soil Testing

Refer to Gardening Practice.

## Systematic Botany

Refer to Plant Morphology and Taxonomy.

## Taxonomy of Spermatophytes

## 1. Horticultural Taxonomy

## 2. Plant Hybridization

## 3. Pollen and Spores

**Location:** New York Botanical Garden, Bronx, NY.

**Length:** 1. 24 hours (8 weeks).
2. 12 hours (8 weeks).
3. 16 hours (8 weeks).

**Dates:** 1. September 1977—Present.
2. April 1978—Present.
3. September 1976—Present.

**Objective:** To provide participants with a knowledge of the principles of taxonomy with emphasis on horticultural plants.

**Instruction:** Identification, nomenclature, and classification; vegetative organs; vascular cyptogams; gymnospermae; flowers, inflorescences, and fruits; angiospermae, monocotyledoneae, and dicotyledoneae; genetic and botanical principles underlying plant breeding; commonly used techniques for producing, selecting for, and maintaining hybrid lines; problems and barriers to obtaining hybrid lines; current and potential techniques; palynology; structure and identification of pollen and spores; dispersion of pollen and spores; collection techniques; laboratory treatment, analysis, and interpretation of pollen and spores; ecology and paleo-ecology; taxonomy; evolution; allergies. (Prerequisite for Courses 1, 2, and 3: Basic Botany.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Botany (1/79). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

## Turf and Grounds Maintenance

Refer to Home Landscaping and Garden Maintenance.

## Vegetable Gardening

Refer to Home Landscaping and Garden Maintenance.

## Winter Botany

Refer to Field Studies.

# NEW YORK CITY DEPARTMENT OF EMPLOYMENT

The Department of Employment (DOE) was created to coordinate the manpower efforts of business, labor, and community organizations to meet the employment needs of New York City. Through 11 Comprehensive Manpower Centers and 26 Neighborhood Manpower Service Centers, unemployed persons are interviewed, counseled, tested, trained, and placed in jobs.

The Office of Staff Development and Training offers a wide range of courses to staff within the Department. The curriculum includes agency orientation, interviewing, supervision, communication skills, job development, organizational development skills, planning skills, case management, testing, and other courses tailored to meet specific requirements. Training is conducted both on site and at the Office's training facility where videotape and other technical aids provide versatility in structuring learning activities.

Source of official student records: Director, Department of Employment, Office of Staff Development and Training, 226 West 26th Street, New York, New York 10001.

## Assessment Skills for Employment Development Planning

**(Formerly Manpower Behavioral Vocational Counseling and Manpower Vocational Counseling Techniques)**

**Location:** 226 West 26th Street, New York, NY.

**Length:** 45 hours (15 weeks).

**Dates:** August 1975—Present.

**Objective:** To train vocational counselors, employment interviewers, and related staff members in the use of counseling techniques with particular emphasis on manpower behavioral counseling.

**Instruction:** Assessment of client's wishes and potential; synthesizing the client's wishes and potential; negotiation of a compromise of this synthesis with the actual possibilities in the worlds of work and training. Emphasis is on vocational planning, career development, working on behavioral objectives, and vocational problem solving. (Prerequisite: Basic Interviewing or one year of supervised counseling experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Industrial Psychology or Vocational Counseling (8/75).

## Basic Interviewing (BII)

Refer to Introduction Interviewing.

## Case Management Supervision (D III)

Refer to Counseling Supervision.

## Counseling Supervision

**(Formerly Case Management Supervision [D III])**

**Location:** 226 West 26th Street, New York, NY.

**Length:** **Version 1:** 45 hours (15 weeks).
**Version 2:** 44 hours (11 weeks).

**Dates:** **Version 1:** August 1975—February 1976.
**Version 2:** March 1976—Present.

**Objective:** To train supervisors of case workers in supervisory practices, particularly as related to case supervision.

**Instruction:** Social and psychological analysis of the role of work in our society and the role of the case supervisor. Intensive application of the supervisory training of counselors utilizing the techniques of role playing, microsupervision, and case conferences. (Prerequisite: Basic Supervision or equivalent supervised experience.)

**Credit recommendation:** In the graduate degree category, 3 semester hours in Community Psychology, Counseling, Education, Industrial Psychology, or Social Work (8/75).

## Descriptive Statistics

**Location:** 226 West 26th Street, New York, NY.

**Length:** 45 hours (15 weeks).

**Dates:** August 1975—January 1981.

**Objective:** To provide the student with an introduction to basic concepts of descriptive statistics.

**Instruction:** Basic measures of central tendency and variability; percentiles; regression; correlation; mathematical terminology and formulas used in basic statistics. The course provides practice in the computation and use of basic statistical indices and in the preparation of graphs and charts.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Statistics (8/75).

## Human Relations Laboratory: Personal Development and Group Dynamics (B XVI, E IX)

**Location:** 226 West 26th Street, New York, NY.

**Length:** 105 hours (15 weeks).

**Dates:** September 1973—Present.

**Objective:** To stimulate and support the personal growth of the student through the development of human relations skills and interpersonal insights.

**Instruction:** Application of theory and concepts toward the development of human relations skills (understanding the effect of one's behavior, listening and understanding others, giving and receiving feedback, and increasing effectiveness in shared leadership and membership functions) and interpersonal insights (sensitivity to others and self, understanding dynamics of groups). Techniques and resources include role playing, videotaping, and a weekly log kept by each student.

**Credit recommendation:** In the upper division baccalaureate category, 6 semester hours in Behavorial and Social Sciences (3 theory, 3 laboratory); or in the graduate degree category, 6 semester hours in Counseling Psychology, Educational Psychology, Human Relations, Management Development, Public Administration, Recreation Administration, or Social Work (3 theory, 3 laboratory) (8/75).

### Introduction to Basic Employment Assessment (B V)

Refer to Introduction to Basic Employment Assessment and Employment Development Planning.

### Introduction to Basic Employment Assessment and Employment Development Planning

**(Formerly Introduction to Basic Employment Assessment [B V])**

**Location:** 226 West 26th Street, New York, NY.

**Length:** 45 hours (15 weeks).

**Objective:** To provide participants with a basic understanding of psychometrics and specifically, employment-related testing.

**Instruction:** Administration and scoring of tests; interpretation of test results; helping clients relate test results to their vocational plans; psychometric terminology; introduction to basic psychometric statistics. Achievement, aptitude, personality, interest, and work-sample methods of evaluation are explored through the experiential methods.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Counseling, Education, or Psychology (8/75).

### Introduction to Interviewing

**(Formerly Basic Interviewing [B II])**

**Location:** 226 West 26th Street, New York, NY.

**Length:** 45 hours (15 weeks).

**Dates:** January 1974—Present.

**Objective:** To provide the student with a working knowledge of the interview process.

**Instruction:** Interviewing as a problem-solving skill; climate setting, developing trust, and opening and maintaining communication channels. Skills are developed through the use of films, reading materials, student logs, and videotape and practice interviews.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Counseling, Education, or Social Science (8/75).

### Management Development (D IV)

Refer to Organizational Consultation.

### Manpower Behavioral Vocational Counseling

Refer to Assessment Skills for Employment Development Planning.

### Manpower Vocational Counseling Techniques

Refer to Assessment Skills for Employment Development Planning.

### Micro-Interviewing

**Location:** Harlem Income Maintenance Center 32, 165 East 126th Street, New York, NY; 226 West 26th Street, New York, NY; various centers.

**Length:** 45 hours (15 weeks).

**Dates:** January 1975—Present.

**Objective:** To enable intake workers, case managers, and case workers to develop the basic skills needed to conduct various kinds of interviews.

**Instruction:** Indepth investigation of the interview as the forum for important communication between client and interviewer. By detailed examination of short segments of interviews, the students develop and practice interviewing skills. Students role play short interviews which are video and/or audio taped, receive feedback, and continue or redo the initial role play incorporating the suggestions made by the group. (Prerequisite: Basic Interviewing or six months supervised interviewing or counseling experience.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Clinical Psychology, Counseling, Education, Social Work, or Sociology (8/75).

### New York Institutions that Affect the Unemployed (B X)

**Location:** 226 West 26th Street, New York, NY.

**Length:** 105 hours (15 weeks).

**Dates:** September 1974—January 1981.

**Objective:** To provide a field visit program to enable the student to observe and evaluate the nature of the various institutions that provide service to the poor.

**Instruction:** Lectures, discussions, and field visits to a variety of legal, health, and educational institutions that serve the clients of the students in the course. After each visit, each student prepares written observations and an evaluation of the delivery and use of the services provided.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Community Mental Health, Social Work, or Sociology (8/75).

## Organizational Consultation

**(Formerly Management Development [D IV])**

**Location:** 226 West 26th Street, New York, NY.

**Length:** 105 hours (15 weeks).

**Dates:** September 1973—Present.

**Objective:** To provide managers, administrators, and supervisors with an understanding of the major functions of management and to develop the skills leading to managerial success.

**Instruction:** Theory and application of management by objectives and results. Goal planning and programming; problem solving; decisionmaking; managerial styles; communication; conflict management; influence; planned change. Emphasis is on group participation in a problem-solving setting. Techniques and resources include role playing, case studies, in-basket exercises, video taping, a notebook of relevant readings, and a weekly log kept by each student.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 6 semester hours in Business and/or Public Administration, Industrial Psychology, Labor Relations, or Social Work (8/75).

# NEW YORK CITY HEALTH AND HOSPITALS CORPORATION CENTRAL SCHOOL OF RESPIRATORY THERAPY

The Central School of Respiratory Therapy was established at Coney Island Hospital in 1975, and is currently located at Metropolitan Hospital Center—8A. Its major purpose is to meet the needs of the community for training qualified respiratory technicians. The technicians work in the hospitals of the New York City Health and Hospitals Corporation, as well as in other hospitals in the metropolitan area.

The Respiratory Therapy Program is a twelve-month program of didactic and clinical instruction. Its objectives are to provide training in modern respiratory care and to meet the professional standards of the National Board for Respiratory Therapy. During the school year the students receive classroom and laboratory instruction at Metropolitan Hospital Center—8A, and clinical instruction at a number of hospitals in the New York City area. The school is fully accredited by the Joint Review Committee for Respiratory Therapy Education, and the American Medical Association Council on Medical Education.

Source of official student records: Administrative Office, Central School of Respiratory Therapy, Metropolitan Hospital Center—8A, 1901 First Avenue, New York, New York 10029.

## 1. Acid Base Physiology (112)
## 2. Hospital Organization and Ethics in the Care of the Sick (101 and 102)
## 3. Medical Terminology and Nursing Arts (107 and 114)
## 4. Microbiology (110)
## (Selected Topics in Respiratory Therapy)

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 1. 50 hours (5½ weeks).
2. 40 hours (4 weeks).
3. 55 hours (5½ weeks).
4. 30 hours (5 weeks).

**Dates:** June 1976—Present.

**Objective:** To provide students with an overview of medical topics closely associated with respiratory therapy.

**Instruction:** Acid base balance; hospital organization; medical ethics; medical terminology; nursing arts; applied microbiology.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Respiratory Therapy (10/79).

## Anatomy and Physiology (106)

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 110 hours (11 weeks).

**Dates:** June 1977—Present.

**Objective:** To provide students with an elementary knowledge of the structures and functions of the human body as a background for further study of specific systems.

**Instruction:** The structure and function of the human body: basic overview of integumentary, musculoskeletal, circulatory, endocrine, digestive, respiratory, excretory, nervous, and reproductive systems. No laboratory experience is included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in General Science (10/79).

## Cardiopulmonary Physiology (108)

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 50 hours (6 weeks).

**Dates:** April 1977—Present.

**Objective:** To provide students with advanced knowledge of cardiopulmonary physiology.

**Instruction:** Pulmonary physiology; mechanics of respiration; principles of gas exchange; pulmonary function and testing; pulmonary circulation; ventilation-perfusion relationships; anatomy of the circulatory system; cardiac physiology; interpretation of EKG's.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Allied Health Sciences or Biology (10/79).

## Chemistry and Physics (105)

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 100 hours (11 weeks).

**Dates:** April 1977—Present.

**Objective:** To provide students with an understanding of some basic principles of chemistry and physics.

**Instruction:** Weights and measures; temperature scales and metrics; atomic theory; molecular theory; formulas and radicals; electrolytic solution; chemical equilibrium; acid base theory; gas laws; gas in solution; diffusion and osmosis; oxidation reduction reactions; characteristics of hydrogen, oxygen, and water. Lecture and labortory demonstration are included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in General Science (10/79).

## Clinical Practicum (116)

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 1,000 hours (25 weeks).

**Dates:** September 1977—Present.

**Objective:** To provide students with supervised clinical training in respiratory care.

**Instruction:** Students are assigned to various clinical affiliates each of which provides exposure to one or more of the following: medical gas administration; humidity and aerosol therapy; IPPB; mechanical ventilation; airway management; physical therapy techniques; cardiopulmonary resuscitation; cleaning and sterilization techniques. In addition, students participate in case presentations, seminars, and rounds with the clinical instructor and/or a physician. They are also required to write a research paper.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 7 semester hours in Respiratory Therapy (10/79).

## Equipment Used in Gas Therapy, Humidification, and Aerosol Therapy, and Its Maintenance (109)

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 100 hours (10 weeks).

**Dates:** May 1976—Present.

**Objective:** To provide students with an understanding of, and expertise in, the use of basic respiratory therapy equipment.

**Instruction:** Cylinders; bulk oxygen systems; regulatory agencies; regulators and flowmeters; humidification and aerosol equipment; oxygen equipment; gas analyzers; IPPB theory and equipment; artificial airways; manual resuscitators; intubation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Respiratory Therapy (10/79).

## Mathematics (104)

Refer to Medical Methematics (104).

## Medical Mathematics (104)

**(Formerly Mathematics [104])**

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 49 hours (4½ weeks).

**Dates:** April 1975—Present.

**Objective:** To provide students with an introduction to the most common mathematical concepts used in the allied health sciences.

**Instruction:** Mathematical symbols; metric and decimal systems; signed numbers; fractions; significant figures; algebra; linear functions; ratios; exponents; logarithms.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences (10/79).

## Pathology (115)

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 35 hours (3½ weeks).

**Dates:** April 1977—Present.

**Objective:** To provide students with a general knowledge of pathology, with special emphasis on diseases of the cardiorespiratory system.

**Instruction:** Fluid and electrolyte balance; inflammation; heart failure and diseases; pulmonary embolism and infectious diseases; chronic obstructive lung diseases; neuromuscular diseases; carcinoma of the lung; ARDS; pneumoconioses; cystic fibrosis.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Respiratory Therapy (10/79).

## Pharmacology (111)

## (Respiratory Therapy Pharmacology)

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 20 hours (3½ weeks).

**Dates:** August 1977—Present.

**Objective:** To provide the students with a survey of pharmacology, with emphasis on drugs used in respiratory therapy.

**Instruction:** Administration of drugs; calculation of dosages; classification of drugs, including indications, contraindications, and side effects.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Respiratory Therapy (10/79).

## Ventilators and Their Maintenance (113)

**Location:** Metropolitan Hospital Center—8A, 1901 First Avenue, New York, NY.

**Length:** 150 hours (8 weeks).

**Dates:** August 1975—Present.

**Objective:** To provide students with a working knowledge of mechanical ventilators, their principles of operation, and their physiologic effects on critical care patients.

**Instruction:** Pressure ventilators; volume ventilators; fluidic ventilators; neonatal ventilators; weaning; PEEP; CPAP; IMV; physiologic indications; contraindications; monitoring; side effects.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Respiratory Therapy (10/79).

# NEW YORK CITY POLICE DEPARTMENT

The New York City Police Department serves the citizens of the five boroughs of the City. It is the nation's largest police agency, employing approximately 27,000 persons. In addition to a large patrol force, the Department has a wide variety of specialized law enforcement units. Some 2,000 officers have completed college, and 10,000 are currently enrolled in degree programs.

The City Police Academy is responsible for conducting formal training programs within the Department. In addition to its entry-level programs, the Academy develops and conducts inservice courses in organization, management, and such specialized areas as investigation, crime prevention, and security for both its own personnel and those of other criminal justice agencies. The Academy also evaluates and coordinates decentralized training programs and acts as the liaison between the Department and higher education institutions.

Source of official student records: Records Officer, Police Academy, 235 East 20th Street, New York, New York 10003.

## INSERVICE COURSES

### Basic Criminal Investigator's Course

**Location:** Police Academy, 235 East 20th Street, New York, NY.

**Length:** 105 hours (3 weeks).

**Dates:** February 1976—June 1981.

**Objective:** To provide law enforcement personnel with an understanding of the theory and practice of criminal investigation.

**Instruction:** The law and investigative techniques as they relate to specialized types of investigation, such as those relating to organized crime, drug abuse, stolen credit cards, and juvenile offenders; the development of verbal skills and strategies for interviewing in various criminal situations; standards of proof; surveillance techniques; courtroom testimony. The course includes guest lectures by experts in special topics and practical exercises in field investigations.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Criminal Justice or Criminal Science(10/76).

### Basic Management Orientation Course

**Location:** Police Academy, 235 East 20th Street, New York, NY.

**Length: Version 1:** 210 hours (6 weeks).
**Version 2:** 140 hours (4 weeks).

**Dates: Version 1:** October 1974—September 1977.
**Version 2:** October 1977—June 1981.

**Objective:** To provide the police supervisor with the necessary management concepts and techniques to adequately perform his/her role.

**Instruction:** Development of management theory and its application to the law enforcement function; consideration of the works of Blake, Mouton, McGregor, Maslow, Herzberg, and others; the behavioral science approach to management; techniques of problem solving. Supervisory concepts and practices; legal duties of police supervisory personnel; administrative duties of first-line supervisors; motivation and training of personnel. Methods of instruction; communications structure; oral communications skill; managing intergroup relations; psychology of communication.

**Credit recommendation: Version 1:** In the upper division baccalaureate category, 3 semester hours in Communication and 3 semester hours in Personnel Management (10/76). **Version 2:** In the upper division baccalaureate category, 1 semester hour in Communication and 3 semester hours in Personnel Management (7/78).

### Basic Management Theory and Techniques

**Location:** Police Academy, 235 East 20th Street, New York, NY.

**Length:** 48 hours (16 weeks).

**Dates:** February 1969—June 1981.

**Objective:** To enable the police supervisor to apply management techniques, theories, and concepts in his/her work.

**Instruction:** Development of management theory and its application to the law enforcement function; consideration of the works of Blake, Mouton, McGregor, Maslow, Herzberg, and others; the behavioral science approach to management; A.M.A. Standards of Performance Program; techniques of problem solving. The course includes the use of case studies and role playing.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Personnel Management (10/76).

### Basic Spanish for Police Officers
### 1. Introduction to Spanish Language
### 2. Intermediate Spanish for Police Officers

**Location:** Various locations in New York City.

**Length:** 1. 140 hours (7 weeks).
2. 120 hours (6 weeks).

**Dates:** September 1972—June 1981.

**Objective:** To develop in law enforcement officers the basic skills in the Spanish language, with emphasis on conversation, in order that they may communicate more effectively with the Hispanic community in New York City.

**Instruction:** Formulation of the basic grammatical knowledge needed for students to use Spanish properly, and development of an active vocabulary of 1,500 words. All tenses of the indicative; the four cases of articles and nouns; singular and plural forms; pronouns; adjectival endings; basic word order of sentences; the conditional and imperfect forms of regular verbs; irregular verbs. Emphasis is on idioms and terminology applicable to the daily needs of police officers. The course includes the use of group and individual, self-paced instruction with programmed materials, role playing, and tapes. The course is enriched through planned field experiences in addition to regular classroom instruction covering the culture and history of Hispanics in New York City.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Spanish (10/76). NOTE: Courses 1 and 2 must both be completed to receive credit. If a student obtains the highest possible rating on the scale used in these two courses, and if the Police Department supplies a detailed written evaluation of that student, a school may consider granting additional credit.

## Homicide Investigations

**Location:** New York State Armory, 125 West 14th Street, New York, NY.

**Length:** 70 hours (2 weeks).

**Dates:** October 1976—June 1981.

**Objective:** To provide the experienced investigator with an understanding of advanced techniques in the field of homicide investigations.

**Instruction:** Comprehensive and intensive treatment of concepts and techniques in homicide investigations. Law of homicide; typologies of homicide, such as sudden, suspicious, and violent death, sex-oriented and other felony homicides, and traumatic deaths; interaction of the components of the criminal justice system in homicide cases. (Prerequisite: Criminal Investigation, or Basic Criminal Investigator's Course, or an equivalent course.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Criminal Justice or Criminal Science (10/76). NOTE: A college should carefully consider the granting of credit to a student for more than one advanced investigatory course because of the similarity in subject matter covered.

## Intermediate Spanish for Police Officers

Refer to Basic Spanish for Police Officers.

## Internal Investigations

**Location:** 74 Poplar Street, Brooklyn, NY.

**Length:** 70 hours (2 weeks).

**Dates:** January 1973—June 1981.

**Objective:** To provide the law enforcement officer with an understanding and application of the techniques for conducting internal investigations in law enforcement work.

**Instruction:** Proper procedures for investigating alledged police misbehavior to insure that such investigations are conducted in an objective and thorough manner and that standardized methods are followed throughout the Department; court decisions in the areas of Miranda Rights, search and seizure and seizure limitations, lineup procedures and administrative hearings where petitioners are police officers; interview, interrogation, and surveillance techniques; report writing. (Prerequisite: Criminal Investigation, or Basic Criminal Investigator's Course, or an equivalent course.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Criminal Justice or Criminal Science (10/76). NOTE: A college should carefully consider the granting of credit to a student for more than one advanced investigatory course because of the similarity in subject matter covered.

## Introduction to Spanish Language

Refer to Basic Spanish for Police Officers.

## Robbery Investigations

**Location:** New York State Armory, 125 West 14th Street, New York, NY.

**Length:** 35 hours (1 week).

**Dates:** October 1976—June 1981.

**Objective:** To provide the experienced investigator with an understanding of advanced techniques in the field of commercial robbery investigations.

**Instruction:** Comprehensive and intensive treatment of concepts and techniques in commercial robbery investigations. Law of robbery; climate of robbery; investigation of a robbery case; robbery alert; hostage situations. (Prerequisite: Criminal Investigation, or Basic Criminal Investigator's Course, or an equivalent course.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Criminal Justice or Criminal Science (10/76). NOTE: A college should carefully consider the granting for more than one advanced investigatory course because of the similarity in subject matter covered.

## Security Operations

**Location:** Police Academy, 235 East 20th Street, New York, NY.

**Length:** 68 hours (18 weeks).

**Dates:** December 1972—June 1981.

**Objective:** To provide the student with an understanding of security techniques in order to reduce and prevent losses due to theft and casualty.

**Instruction:** External security: methods of entry; locks; alarms; safety devices; risk analysis. Internal security: security planning and surveys; control of personnel and visitors; commercial, residential, and industrial security; civil disturbances in high-rise buildings. Report writing. Law of arrest.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Security Administration (10/76).

### Sex Crimes Investigations

**Location:** New York State Armory, 125 West 14th Street, New York, NY.

**Length:** 35 hours (1 week).

**Dates:** October 1976—June 1981.

**Objective:** To provide the experienced investigator with an understanding of advanced techniques in the field of sex crimes investigations.

**Instruction:** Crisis intervention techniques; theory of victimization; psychology of the sex crime victim; sex crime laws; sexual deviations; evidence gathering and search of the crime scene; trial testimony. (Prerequisite: Criminal Investigation, or Basic Criminal Investigator's Course, or an equivalent course.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Criminal Justice, Criminal Science, or Social Science (10/76). NOTE: A college should carefully consider the granting of credit to a student for more than one advanced investigatory course because of the similarity in subject matter covered.

## STUDENT OFFICER TRAINING PROGRAM

The courses listed below constitute the academic component of the Student Officer Training Program conducted by the New York City Police Academy. This intensive program consists of 22 weeks of classroom instruction, supplemented by a nine-week supervised internship in a precinct. It is attended by all new recruits to the Police Department. The present curriculum is the result of a revision of the previous Recruit Training Program which the Department undertook in October 1973 and which involved outside experts as well as Department personnel. The first class to receive the new curriculum in its entirety graduated from the Academy on June 11, 1974. All of these courses other than the internship are taught at the Academy.

### Community Relations for Police

**Length:** 75 hours.

**Dates:** January 1974—June 1981.

**Objective:** To provide the student with knowledge of his/her role in the community and the expectations of the community he/she serves.

**Instruction:** Exploration of the etiology, manifestations, and proposed solutions for noncrime-related problems that the police service is called upon to resolve. Discussion of children, adolescents, and the problem of juvenile delinquency; intergroup relations, communications theory, and interviewing; crisis intervention and conflict management; treatment of geographical structures and ethnic communitities in New York City.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Criminal Justice, Social Science or Social Work (8/74).

### Criminal Investigation

**Length:** 60 hours.

**Dates:** January 1974—June 1981.

**Objective:** To provide the student with knowledge of his/her responsibilities as the first police representative at the crime scene.

**Instruction:** General principles of investigation, with suggested procedures for specific type of law violators; reporting procedures necessary for statistical studies and specialist follow-up; aspects of crime prevention as they relate to the police officer's role.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, or in the upper division baccalaureate category, 3 semester hours in Criminal Justice (8/74).

### Criminal Law

**Length:** 63 hours.

**Dates:** January 1974—June 1981.

**Objective:** To provide the student with practical working knowledge of specific criminal offenses.

**Instruction:** Comprehensive analysis of crimial law and procedures; methods of interpretation of criminal statutes; statutory definitions of crime; study of case law related to criminal statutes and applications to specific situations. Emphasis is on the underlying framework of criminal law.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Criminal Justice or Criminology (8/74)

## Internship in Criminal Justice

**Length:** 360 hours (9 weeks).

**Dates:** January 1974—June 1981.

**Objective:** To provide field experience as part of the Student Officer Training Program.

**Instruction:** Structured field experience during which the student officer is introduced to the practical application of police theory and technique. Criminal justice procedures; precinct organizational structure (neighborhood police teams and functional management); crisis intervention; community relations activities; reaction control training; investigatory skills; preventive patrol techniques. Individual students are assigned on a rotating basis to selected field training officers who receive special training and extra compensation for their role. The training officers supervise the field experience and evaluate the performance of the students three times during the internship. The final evaluation and certification as a police officer takes place at the end of the probationary year.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 6 semster hours as an Intership in Criminal Justice (8/74).

## Introduction to Law

**Length:** 62 hours.

**Dates:** January 1974—June 1981.

**Objective:** To provide the student with a basic introductory course in law with emphasis on the development of legal principles and concepts and with application to law enforcement.

**Instruction:** The nature of law in contemporary society; study of the U.S. Constitution with emphasis on the Bill of Rights and the Fourteenth Amendment; constitutional rights of the accused; the police officer and the judicial process; application of legal concepts (probable cause, stop, questions, and frisk); court testimony.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Criminology, Government, Police Science, or Political Science (8/74).

## Introduction to Law Enforcement

**Length:** 90 hours.

**Dates:** January 1974—June 1981.

**Objective:** To provide the student with an introduction to law enforcement and its role within society with specific reference to the function of the patrol officer.

**Instruction:** Role of law enforcement and the individual police officer's participation; departmental structure, policy, and rationale of each; individual member's internal and external relationships and functions; purposes and operations of police patrol; skills, techniques, resources, and statutes with which the officer must be familiar.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Criminal Justice (8/74).

## Introduction to Social Psychology

**Length:** 63 hours.

**Dates:** January 1974—June 1981.

**Objective:** To provide the student with knowledge of human behavior that he/she can anticipate upon becoming a police officer.

**Instruction:** Personality; crisis intervention; conflict management; interpersonal interaction; small group dynamics; adolescent behavior; communications theory; transactional analysis.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Behavioral Sciences, Criminal Justice, Social Science, or Social Work (8/74).

## Physical Education

**Part 1: Foundations of Physical Activity**
**Part 2: Lifesaving Techniques**
**Part 3: Safety Education, Accident Prevention, and First Aid**
**Part 4: Self-Defense**
**Part 5: Swimming I**
**Part 6: Swimming II**

**Length:** 170 hours.

**Dates:** January 1974—June 1981.

**Objective:** To prepare the student for the physiological and psychological demands involved in the work of a police officer.

**Instruction: Part 1:** Survey of physiological, psychological, and sociological aspects of physical fitness; skills, body mechanics, and methods of maintaining and improving physical fitness; role of physical conditioning nutrition, and basic health habits. **Part 2:** Advanced survival techniques and strokes; safety procedures; use of flotation devices and safety aids. American Red Cross Senior Lifesaving Certificate is issued to all who pass the senior lifesaving tests. **Part 3:** Principles of safety; theory and practice of first aid procedures in emergency situations (shock, wounds, heart attacks, stokes) and extrications for dangerous situations. **Part 4:** Theory, skills, and practice of judo, karate, and boxing techniques; basic blows, throws, and defenses; application of these skills to combative situations. **Part 5:** Fundamentals of water safety; instruction and practice in various swimming techniques and in elementary forms of diving. **Part 6:** Intermediate swimming; basic water safety techniques; emphasis on form and endurance in the crawl, sidestroke, breaststroke, and elementary backstroke.

**Credit recommendation: Part 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Physical Education (8/74). **Part 2:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Physical Education (8/74). **Part 3:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Physical Education (8/74). **Part 4:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Physical Education (8/74). **Part 5:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Physical Education (8/74). **Part 6:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Physical Education (8/74).

# NEW YORK COUNCIL ON ALCOHOLISM, INC.– ACCEPT

The New York Council on Alcoholism, Inc. is a voluntary health agency which provides treatment for alcoholics. The ACCEPT Unit, affiliated with Cabrini Health Care Center, provides comprehensive care for adult and adolescent alcoholics and their families in the New York City metropolitan area. The Training Unit provides educational programs for students, counselors, administrators, health providers, and treatment personnel. The professional staff conducts these programs with the assistance of adjunct faculty drawn from city agencies and community-oriented facilities in the area.

Source of official student records: Rev. Msgr. Joseph A. Dunne, 142 East 29th Street, New York, New York 10016.

### Training Course for Employee Alcoholism Counselors

### (Survey of Alcoholism: Its Nature and Treatment in the Work Setting)

**Location:** 300 Park Avenue South, New York, NY.

**Length:** 51 hours (8 weeks).

**Dates:** September 1974—December 1978.

**Objective:** To provide participants from business, labor, government, and health-related facilities with an overview of the physiological, sociological, psychological, and treatment aspects of alcoholism.

**Instruction:** Description of the role of the counselor in working with alcoholics; the pathology and psychiatric diagnosis of alcoholism; the modalities of treatment; organizational problems and agency programs; an analysis of comprehensive care; cultural factors and adolescent problems of alcoholism. The course consists of lectures and discussions which are supplemented by field trips to agencies concerned with the counseling or treatment of alcoholics.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Social Science (6/76).

# NEW YORK INSTITUTE OF CREDIT

The New York Institute of Credit (NYIC) is the educational arm of the New York Credit and Financial Management Association, local chapter of the National Association of Credit Management. It provides academic and professional courses and programs to commercial credit, bank lending, and factoring personnel in approximately 200 firms in greater New York City.

The courses listed below constitute a majority of the Institute's Associate, Fellow, and 900-Hour Certificate Programs. Courses are taught in the NYIC classrooms located at 71 West 23rd Street in New York City, and various bank and college facilities in the New York City area.

Source of official student records: Office of the Registrar, New York Institute of Credit, 71 West 23rd Street, New York, New York 10010.

## Accounting I

**Location:** Institute classrooms and various bank and college facilities in the New York City area.

**Length:** 60 hours (15 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide the student with an understanding of the fundamentals of accounting theory and practice.

**Instruction:** Form of financial statements; accounting for long- and short-term borrowing; assets and depreciation; concept of a going concern; materiality, conservationism, and the matching of revenues and expenses; current topics in accounting, including current value emphasis.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (6/78).

## Advanced Credit in International Trade (International Trade)

**Location:** Institute classrooms and various bank and college facilities in the New York City area.

**Length:** 30 hours (15 weeks).

**Dates:** September 1977—Present.

**Objective:** To provide the student with an introduction to the financing of international trade, with emphasis on current techniques.

**Instruction:** Overview of export promotion agencies in the United States, including the Foreign Credit Insurance Association and the Export Import Bank of the United States; introduction to international trade.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in International Trade (6/78).

## 1. Bank Lending I
## 2. Bank Lending II

**Location:** Institute classrooms and various bank and college facilities in the New York City area.

**Length:** 1. 30 hours (15 weeks).
2. 30 hours (15 weeks).

**Dates:** 1. September 1974—Present.
2. September 1974—Present.

**Objective:** To provide the student in banking or related fields with a basic introduction to the issues and analytical tools involved in commercial lending decisions, and the opportunity to apply those tools through the use of case studies.

**Instruction:** Credit policy; basic analytical tools for credit analysis, such as ratio analysis, cash flow analysis, and analysis of financial statements. Application of analytical tools to practical commercial situations, such as seasonal loans, cash flow lending, and evergreen loans through the use of case studies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Commercial Lending (6/78).

## Bank Lending II

Refer to Bank Lending I.

## Business Communications I

**Location:** Institute classrooms.

**Length:** 30 hours (15 weeks).

**Dates:** September 1974—Present.

**Objective:** To enable the student to develop skills in written business communications.

**Instruction:** Theory and practice of preparing various types of business letters, including credit and collections, applications, inquiries, orders, claims, and adjustments. Stress on correct grammar and effective writing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Communications (6/78).

## Business Communications II

**Location:** Institute classrooms.

**Length:** 30 hours (15 weeks).

**Dates:** January 1975—Present.

**Objective:** To enable the student to develop effective oral communication skills.

**Instruction:** Acquisition of basic skills and confidence needed to speak effectively; introduction to the behavioral principles underlying effective oral communications. The organization of content; building self-confidence and poise; the use of body and voice mechanisms as effective tools of thought communication; development of listening skills.

**Credit recommendation:** In the lower division baccaluareate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Business Communications (6/78).

### Business Communications III (Business Report Writing)

**Location:** Institute classrooms and various bank and college facilities in the New York City area.

**Length:** 30 hours (15 weeks).

**Dates:** January 1975—Present.

**Objective:** To enable the student to apply advanced communication skills in researching and writing.

**Instruction:** Importance of effective report writing; researching, collecting, and organizing information; presentation of oral and written formal, special, and short reports; writing techniques; use of visual aids; approaches to business communications. (Prerequisite: Business Communications I or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate caegory, 2 semester hours in Business Communications (6/78).

### Business Organization

**Location:** Institute classrooms.

**Length:** 30 hours (15 weeks).

**Dates:** January 1976—Present.

**Objective:** To introduce the student to the development of the American business organization in its diverse forms.

**Instruction:** History and nature of American business; business environment, social responsiblity, and ethics; organization and management; management activities and functions; financing business; problems and policies; nature and scope of marketing; distribution; advertising; personnel; production.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Administration (6/78).

### Business Psychology

**Location:** Institute classrooms.

**Length:** 30 hours (15 weeks).

**Dates:** September 1974—Present.

**Objective:** To develop an understanding of current concepts in psychology and their relationship to the business world.

**Instruction:** Interpersonal relationships; group behavior; group pressures and group dynamics; the working environment; emotional health and creativity.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in applied Behavioral Science (6/78).

### 1. Credit Law I (Introduction to Business Law)
### 2. Credit Law II

**Location:** Institute classrooms and various bank and college facilities in the New York City area.

**Length:** 1. 30 hours (15 weeks).
2. 30 hours (15 weeks).

**Dates:** 1. September 1974—Present.
2. September 1974—Present.

**Objective:** To provide the student with a basic understanding of business law in the American society.

**Instruction:** Forms of business organizations; property; Uniform Commercial Code; bankruptcies and insolvencies.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Commercial Law (6/78).

### Credit Law II

Refer to Credit Law I.

### Factoring and A/R Financing

**Location:** Institute classrooms

**Length:** 30 hours (15 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide the student with an introduction to factoring and accounts receivable financing.

**Instruction:** Factoring techniques including bookkeeping, documentation, field auditing, internal controls, and cash flows. (Prerequisites: Credit and Collections and Financial Statement Analysis.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Finance (6/78).

### Marketing

**Location:** Institute classrooms.

**Length:** 30 hours (15 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide the student with an introduction to marketing.

**Instruction:** Survey of basic concepts of marketing, such as consumer behavior, advertising, pricing, marketing reserch, wholesale and retail distribution, and promotional strategy.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Marketing (6/78).

# NEW YORK STATE ASSEMBLY

The New York State Assembly is one of the two houses of the State Legislature. Its major function is the consideration and enactment of legislation.

The Assembly established the Intern Program in 1971. It is directed by a bipartisan committee of legislators with strong interests in education. The Assembly Intern Committee is provided for in the Assembly Rules and its membership includes legislative leaders such as the Assembly's Speaker Pro Tem, Majority Leader, Minority Leader, and the Chairman and Ranking Minority Member of the Assembly Higher Education Committee. The Committee has a permanent staff which carries on the day-to-day activities of the program with the assistance of an advisory panel of senior Assembly staff members. In addition, the Committee appoints a professor-in-residence each year to supervise the educational aspects of the program. The program is open to New York State residents matriculated in a college or university degree program as juniors, seniors, or graduate students. Out-of-State residents who are similary matriculated at colleges in New York State may also apply.

The Assembly Intern Committee develops the basic structure of the Intern Program with the support of its advisory panel and staff.

Source of official student records: Assembly Intern Program, Legislative Office Buildling, Room 829-A, Albany, New York 12248.

## Assembly Intern Program

**Location:** The State Capitol, Albany, NY.

**Length:** 20 weeks (Assembly Session); minimum of 30 hours per week.

**Dates:** January 1978—Present.

**Objective:** To provide the student with an indepth experience combining the theory and practice of legislative process in order to develop research, communicaiton, and interpersonal skills and an understanding of the way in which the Legislature works.

**Instruction:** The program begins with a comprehensive week-long orientation to the operation of the State government, with particular reference to the workings of the Legislature. Interns then receive full-time job assignments in the office of an Assembly member or Assembly committee; the assignments are based on a work plan and a learning contract between a supervisor and an intern; tasks involve constituent work, research on specific legislation, research on the legislative process, and office administration; supervisors are either members of the Assembly, members of their legal or research staffs, or committee staff; job performance is formally evaluated on a regular basis by the supervisors. During the course of the program, interns participate in seminars covering such topics as Descriptive Statistics, Evaluating Social Programs, Behavior of Legislators, Legislative Decisionmaking, and Current Political Issues. Interns receive academic guidance and support, on an individual and group basis, from the permanent program staff, from the professor-in-residence, and from staff within the Assembly (and the State government) who work with the interns on specific topics and who provide them with a unique blend of academic and practical expertise. The professor-in-residence evaluates the interns at regular intervals and at the end of the program.

**Credit recommendation:** In the upper division baccalaureate category, 15 semester hours in appropriate departments or in general elective credit (4/78).

# NEW YORK STATE ASSOCIATION OF REALTORS, INC.

The New York State Association of Realtors, Inc. (NYSAR) is a nonprofit association of the 52 local real estate boards in New York State. NYSAR serves its member realtors through the promotion and maintenance of ethical standards in the profession, the support of legislation relating to real estate, and the provision of continued professional education for members and consumer education for residents of the State.

## NEW YORK REALTORS' INSTITUTE

The New York Realtors' Institute was established in 1969 to offer real estate courses in the State according to standards developed by the National Association of Realtors. Upon successful completion of the designation requirements, the realtor member is awarded the GRI designation. Completion of GRI II or GRI III satisfies the 45-hour continuing education requirement for New York State licensees. All classes are open to the public.

Source of official student records: Education Department, New York State Association of Realtors, Inc., Executive Park Tower, Western Avenue at Fuller Road, Albany, New York 12203.

### Graduate, Realtors' Institute Course I (Principles of Real Estate)

**Location:** Locations throughout New York State.

**Length:** 33 hours (1-3 weeks).

**Dates:** January 1975—November 1979.

**Objective:** To provide the student with a basic knowledge of the legal, practical, and procedural aspects of the real estate brokerage business, with emphasis on residential brokerage.

**Instruction:** Legal aspects; financing; residential construction; estimating a listing price; introduction to residential brokerage; listing and marketing properties; personal and career management; organization; urban growth, structure, and change; ethics.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Real Estate Principles (5/77).

### Graduate, Realtors' Institute Course II (Principles of Real Estate)

**Location:** Locations throughout New York State.

**Length:** **Version 1:** 32 hours (1-3 weeks).
**Version 2:** 30 hours (1-3 weeks).

**Dates:** **Version 1:** January 1975—February 1980.
**Version 2:** February 1980—Present.

**Objective:** **Version 1:** To expand on the legal, practical, and procedural aspects of the real estate brokerage business covered in Course I. To introduce the residential associate to some aspects of commercial brokerage. **Version 2:** To provide the student with information on the legal, practical, and procedural aspects of the real estate brokerage business. To introduce the residential associate to certain aspects of commercial brokerage.

**Instruction:** **Version 1:** Advanced legal aspects (title and title problems, deeds, leases, mortgages, and condominiums); real estate market analysis; truth-in-lending; marketing commercial real estate; appraisal methods; review of real estate mathematics and use of the calculator; advanced construction; taxation; personal selling; design criteria of a residential subdivision. (Prerequisite: GRI Course I.) **Version 2:** Advanced legal aspects, (title and title problems, deeds, leases, mortgages, and condominiums); real estate market analysis; truth-in-lending; marketing commercial real estate; appraisal methods; advanced construction; taxation; design criteria of a residential subdivision.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Real Estate Principles (5/77).

### Graduate, Realtors' Institute Course III (Commercial Investment Real Estate)

**Location:** Locations throughout New York State.

**Length:** 30 hours (1 week).

**Dates:** January 1975—Present.

**Objective:** To provide the student with the knowledge and skills required to execute simple investment brokerage transactions and perform the rudiments of property management, office management, and industrial and commercial real estate brokerage.

**Instruction:** Introduction to investment and estate; financing investment real estate; Federal taxation and real estate investment; types of investment property; estimating the stream of cash flow generated by a real estate investment; pricing investment property; shopping centers and leasing; operation of a real estate broker's office; property management.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Commercial Investment Real Estate (5/77).

## Graduate, Realtors' Institute Course IV (Principles of Real Estate)

**Location:** Locations throughout New York State.

**Length:** 33 hours (1-3 weeks).

**Dates:** July 1976—November 1979.

**Objective:** To provide the student with a working knowledge of the legal aspects of the real estate transaction.

**Instruction:** Interests in realty; general business law; liens and easements; leases; bonds and mortgages; deeds; agency; license law; rent regulation; voluntary and involuntary alienation; real estate contracts; review. (Prerequisite: GRI Course I.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Real Estate Principles (5/77).

# NEW YORK STATE BANKERS ASSOCIATION

The New York State Bankers Association is a nonprofit trade association of 280 commercial banks organized to promote the general welfare and usefulness of commercial banks and trust companies in the State. The association comprises three divisions (commercial banking, consumer credit, and trust) and provides services in the areas of communications, education, government relations, insurance, and research.

The Education Section develops and administers educational and professional training programs for the employees of member banks. Courses are provided in response to the expressed needs of the membership and range from short meetings and seminars to three-week residential courses.

Source of official student records: Registrar, New York State Bankers Association, 485 Lexington Avenue, New York, New York 10017.

## Bankers School of Agriculture

**Location:** Cornell University, Ithaca, NY.

**Length:** 62 hours (1 year); two one-week residential sessions.

**Dates:** August 1976—Present.

**Objective:** To provide the student with a comprehensive introduction to agricultural economics.

**Instruction:** Farm management; agronomy; planning for farm investments; dairy husbandry; farm appraisal; analysis of farm credit cases; economics of farm equipment and structures; public problems of agriculture and rural affairs; marketing bank services to farmers. The course includes field trips to illustrate and supplement the classroom instruction.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Agricultural Economics (6/77).

## Consumer Credit School

**Location:** Hotel Thayer, West Point, NY.

**Length:** 80 hours (2 weeks); residential.

**Dates:** September 1976—Present.

**Objective:** To familiarize the student with those technical and managerial factors relevant to modern consumer banking.

**Instruction:** Economics; direct and indirect lending; security and fraud; marketing and administration; bank credit cards; collections; insurance; leasing; operations; electronic funds transfer systems; modern management techniques; legal and historical aspects of consumer credit.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Commercial Bank Management (6/77).

## EDP Audit and Control School

**Location:** Hotel Thayer, West Point, NY.

**Length:** 40 hours (1 week); residential.

**Dates:** November 1975—Present.

**Objective:** To provide the student with a comprehensive exposure to EDP auditing.

**Instruction:** Background of electronic data processing and EDP auditing; computer center staff and organization; EDP auditing responsibilites; evaluation of internal controls (data center controls, control of EDP services); EDP applications and new evaluation techniques; demand deposit accounting; analysis of audit software; importance of audit involvement in EDP planning and design (system and account testing, the auditor's role, the EDP feasibility study and designing, programming, and implementing a computer application); developing an EDP audit work program; future EDP trends. (Prerequisite: Background in accounting, auditing, and financial statement analysis.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting, Electronic Data Processing, EDP Audit and Control, or Finance (6/77).

## Estate Administration School

**Location:** Holiday Inn-Arena, Binghamton, NY.

**Length:** 44½ hours (1 week); residential.

**Dates:** June 1979—Present.

**Objective:** To provide participants with a knowledge of the factors affecting estate administration with particular emphasis on the legal aspects.

**Instruction:** An executor's "forty steps"; fundamentals of wills; domicile and probate procedure; discovery, collection, and preservation of assets; valuations—tangibles, real estate, and close corporations; claims against an estate; Federal estate taxes—TRA '76; carryover basis; accountings, compensation, and distributions; investments, cash requirements, and liquidations; fiduciary income taxes, savings and procedures; business development—policy factors and evaluation of estates. This course is at a level of sophistication which requires prior knowledge of financial accounting and Federal taxation. Course format includes lecture/discussion and seminar sessions. Participants are given an extensive post-course assignment which is graded and returned to them.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Business Administration or Finance (1/79).

## Management School for Career Development

**Location:** Hotel Thayer, West Point, NY.

**Length:** 120 hours (1 year); three one-week residential sessions.

**Dates:** April 1977—Present.

**Objective:** To provide the student with an introduction to financial management and general management.

**Instruction:** Financial management: overview of bank accounting; management of assets and liabilities; analysis of bank financial statements; functional management responsibilities (bank financial operation, portfolio analysis, commercial lending, commercial bank operations, and monetary economics). Management: introduction to basic management responsiblities, including mangagement by objectives, employee relations, planning and control, organization, and EDP management.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Financial Management and 2 semester hours in Management (6/77).

## Trust Administration School

**Location:** Holiday Inn-Arena, Binghamton, NY.

**Length:** 44½ hours (1 week); residential.

**Dates:** June 1979—Present.

**Objective:** To provide participants with a knowledge of the factors affecting trust administration with particular emphasis on the legal aspects.

**Instruction:** Types of trusts and their uses; legal aspects of trusts; fiduciary powers (principle and income, control and flexibility); powers of appointment; practical trust planning; discretionary payments (sprinkling trusts, short-term trusts); income taxation of estates; income taxation of trusts; trusts and estates under TRA '76; terminating trusts—planning and tax aspects; accounting and compensation; personal trust investments; fiduciary responsibilities vs. profitability; examination of a trust department; marketing trust services. This course is at a level of sophistication which requires prior knowledge of financial accounting and Federal taxation. Course format includes lecture/discussion and seminar sessions. Participants are given an extensive post-course assignment which is graded and returned to them.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Business Administration or Finance (1/79).

# NEW YORK STATE COMMISSION OF CORRECTION

The Commission of Correction is primarily responsible for inspecting and monitoring correctional institutions in the State. These include State penitentiaries, county jails, and local police lock-ups. In addition, the Commission investigates unusual incidents occurring in these facilities to insure the safety and welfare of all persons involved, and has the power to close a facility if necessary.

The Commission provides correctional training for persons employed in State, county, and local correctional facilities. Its primary training emphasis is at the county level where it trains approximately 1,000 deputy sheriff corrections officers annually. The Training Unit is part of the Commission's Local Facilities Bureau. The Bureau also includes an Investigation and Inspection Unit and a Technical Assistance Unit. Through the interaction of the three units, the Commission is strengthening the management and operation of local correctional facilities.

Source of official student records: Director of Training, Commission of Correction, Correctional Services Training Academy, 1134 New Scotland Road, Albany, New York 12208.

## Basic Training Program—Phases I and II (Introduction to Corrections)

**Location:** New York State Correctional Services Training Academy, 1134 New Scotland Road, Albany, NY.

**Length:** 62½ hours (2 weeks).

**Dates:** January 1978—Present.

**Objective:** To introduce the student to the basic concepts, philosophies, and practices of the correctional system; to acquaint him or her with basic procedures of law, institutional discipline, and current correctional techniques as they apply to county-level institutions.

**Instruction:** Psychological and sociological considerations for the correctional officer; security procedures; correctional law; jail discipline; human behavior (including officer and inmate interaction); commitment procedures; elements of supervision; correctional policies and practices. The student must prepare a paper demonstrating a grasp of the concepts of the course and applying them to the corrections facility.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Introduction to Corrections (5/78). NOTE: Both Phases I and II must be completed to receive credit.

## Hostage Negotiator's Seminar

**Location:** New York State Correctional Services Training Academy, 1134 New Scotland Road, Albany, NY.

**Length:** 73 hours (2 weeks); includes 24 hours of supervised practical application.

**Dates:** July 1977—Present.

**Objective:** To introduce correctional personnel to the art of hostage negotiation within the correctional setting, emphasizing the behavioral aspects of the hostage taker, negotiator, and hostage.

**Instruction:** Principles, techniques, and legal considerations of hostage negotiations; dynamics of human behavior; group dynamics; communications. Emphasis is on practical application of theoretical principles through role playing, simulation, and case studies. At the completion of the course, the student is required to submit a written report of an emergency plan for hostage negotiation developed for use at his or her facility.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Crisis Intervention, Psychology, or Sociology (5/78).

## Management Laboratory

**Location:** New York State Correctional Services Training Academy, 1134 New Scotland Road, Albany, NY.

**Length:** 35 hours (1 week).

**Dates:** July 1973—Present.

**Objective:** To enable students to identify a variety of leadership styles and to acquaint them with some basic theories of motivation.

**Instruction:** Group dynamics; organizational development. Focus of instruction is on the completion of a number of inventory instruments including Blake's Managerial Grid, Profile on Approaches to Communications, Personnel Relations Survey, and Correctional Policy Inventory. Results of the inventories are discussed privately with each student and recommendations are made to identify and maximize the individual's strengths as a corrections administrator. (Prerequisite: Introduction to Administration, or Introduction to Management, or Organizational Development.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Administration, Management, or Organizational Development (5/78).

# NEW YORK STATE DEPARTMENT OF CIVIL SERVICE

The Department of Civil Service is the central personnel agency for New York State government. It also provides local civil service agencies with many of the services offered to State agencies. Its functions include recruiting; testing and placement of job applicants; reviewing personnel transactions; classifying jobs and allocating them to salary grades; and such personnel services as training, health insurance, and management development. Special programs are conducted to increase employment opportunities for members of minority groups with disadvantaged backgrounds.

Source of official student records: Department of Civil Service, Training Section, State Office Building Campus, Building 1, Albany, New York 12239.

### Introduction to EDP–Technical (B-1-110)

**Location:** Training Section classrooms, State Office Building Campus, Albany, NY.

**Length:** 138 hours.

**Dates:** January 1974–September 1976.

**Objective:** To provide a broad and comprehensive introduction to data processing to further the career development of those who will be directly involved with New York State EDP activities.

**Instruction:** Hardware concepts; systems and programming concepts; case study; programming languages concepts. The course contains no practical computer programming experience. Lecture and discussion is supplemented by laboratory/workshops and a case study in computer systems design.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Data Processing (2/75).

## PUBLIC ADMINISTRATION TRAINING PROGRAM

The Public Administration Training Program is designed for carefully selected New York State agency employees (trainees) and qualified recent graduates of Master's programs in various disciplines (interns). The trainees and interns participate together in this yearlong program which focuses on the basic principles of public administration.

An important tool in the delivery of the program material is the use of weeklong institutes in which experienced academicians and practitioners discuss with the students their knowledge of budgeting, management analysis, the organization of New York State government, and personnel administration. Those concepts are then applied to different current issues in the field. The current issues to be covered each year in the six institutes are decided upon by student consensus based on their combined interests and learning needs. Thus, the concepts taught each year remain the same, while the focus of their application varies according to the circumstances of the time.

On-the-job training plays a significant role in this program. While working with their supervisor and agency training officer, the trainees and interns have the opportunity of applying these new concepts to actual on-the-job situations. Both the trainees' and the interns' working supervisors and the program supervisor in the Department of Civil Service evaluate and report on the students' performance in the program.

At the conclusion of the program, students are required to submit joint research projects which report on their application of recently learned concepts to a specific problem in the field of public administration.

Please note that the credit recommendation which has been established is *only* for the material covered in the six institutes. No attempt was made to evaluate the on-the-job component of the program.

Source of official student records: Supervisor, Intern-Trainee Program, Department of Civil Service, Training Section, State Office Building Campus, Building 1, Albany, New York 12239.

### Public Administration Training Program

**Location:** Training Section classrooms, State Office Building Campus, Albany, NY.

**Length:** 175 hours (1 year); 6 weeklong institutes.

**Dates:** January 1971–June 1979.

**Objective:** To provide the student with an understanding of the basic principles of public administration with particular reference to their application to State government.

**Instruction:** Manpower management and utilization; the structure and function of New York State government; the environment of administration; public policy and problem analysis; intergovernmental relations; the legislative, judicial, and executive processes; current concerns in the field of public administration. At the end of the yearlong program, teams of 4-6 students are required to submit substantial research projects which have applied the concepts acquired over the year to a specific problem in the field of public administration. Each student is also required to submit bimonthly reports and to solve workshop problems. Classroom instruction is enhanced by workshops, the availability of a film library and Civil Service video capabilities, textbooks, and a reference library.

**Credit recommendation:** In the upper division baccalaureate category, 5 semester hours in Political Science, Public Administration, or Social Science (3/75).

# NEW YORK STATE DEPARTMENT OF CORRECTIONAL SERVICES

The Department of Correctional Services is responsible for providing effective and efficient correctional programs in New York State. The Department employs approximately 13,000 persons, including some 5,500 correction officers, in work settings at 14 correctional facilities, five correctional camps, five community-based facilities, and nine area parole offices.

The Training Academy provides entry-level training for new personnel, regular inservice programs for permanent staff, and management and executive development programs. Tuition support programs and liaison activities with higher education institutions are coordinated by the Bureau of Staff Development Personnel at the Academy.

Source of official student records: Director of Staff Development, New York State Department of Correctional Services Training Academy, 1134 New Scotland Road, Albany, New York 12208.

## Conversational Spanish

**Location:** New York State Department of Correctional Services Training Academy, 1134 New Scotland Road, Albany, NY.

**Length:** 40 hours (8 weeks).

**Dates:** June 1974—November 1978.

**Objective:** To develop language skills in order to enable correction officers to communicate more effectively with the Hispanic inmate population in correctional facilities.

**Instruction:** Emphasis is on the acquisition of basic language skills through the practice of listening, speaking, reading, and writing. The course includes simple English/Spanish translation practice, the use of role playing, and an introduction to Hispanic culture in New York State.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Spanish (7/76).

## 1. Foundations of Physical Activity
## 2. Self-Defense

**Location:** New York State Department of Correctional Services Training Academy, 1134 New Scotland Road, Albany, NY.

**Length:** 1. 30 hours.
2. 30 hours.

**Dates:** July 1973—November 1978.

**Objective:** To prepare the trainee for the physiological and psychological demands involved in the work of a correction officer.

**Instruction: Course 1:** Development of physical fitness, including strength and stamina, instruction and practice in movement skills, body mechanics, and methods of maintaining and improving fitness. **Course 2:** Theory, skills, and practice in basic blows, throws, escapes, and defenses (emphasis on restraining holds); application of the skills to competitive situations; fundamentals of boxing, wrestling, judo, and karate.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Physical Education (1/76). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Labor Contract Adminstration

**Location:** New York State Department of Correctional Services Training Academy, 1134 New Scotland Road, Albany, NY.

**Length:** 45 hours (1 week).

**Dates:** February 1978—Present.

**Objective:** To improve management's understanding and knowledge of contract administration, employee discipline, and grievance handling in the public sector.

**Instruction:** Implementing an employer's labor relations policy; management's role in contract administration; development and enforcement of performance standards; purpose and operation of grievance procedures; grievance case preparation and investigation; grievance resolution; preparing and litigating arbitration cases. The lecture-discussion method is used, along with videotaping and role playing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Correction Administration, Criminal Justice, Labor Economics, Personnel Management, or Public Adminsitration (3/78).

## Legal Issues in Corrections for Supervisors: Inmates' Rights and Responsibilities

**Location:** New York State Department of Correctional Services Training Academy, 1134 New Scotland Road, Albany, NY.

**Length:** 26 hours (4 days).

**Dates:** March 1980—July 1980.

**Objective:** To explore in-depth recent and important correctional case law, with emphasis on inmates' rights and responsibilities.

**Instruction:** Emphasis will be placed on: analysis of cases relating to prisons, jails, and the parole setting; model rules and regulations on inmates' rights and responsibilities; how to read and brief correctional law; administrative procedures at various levels of management for the adjudication of disciplinary matters, including their historical development. Course format includes lecture/discussion, problem solving, analysis of videotape segments, and role play.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Criminal Justice or Law (7/80).

## Network Training Program

**Location:** New York State Department of Correctional Services Training Academy, 1134 New Scotland Road, Albany, NY.

**Length:** 60 hours (2 weeks).

**Dates:** January 1979—Present.

**Objective:** To prepare staff to be effective change agents within a therapeutic community in a custodial setting; to provide staff with knowledge and skills useful in milieu therapy.

**Instruction:** Introduction to counseling, including study of the work of Ellis, Glasser, Ivey, and Rogers; counseling and interviewing techniques; group dynamics and group work skills. Course format includes lecture/discussion, small-group laboratories, role-play activities, and use of video feedback. Outside preparation of assignments is required of all students.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Criminal Justice, Psychology, or Social Work; or in the graduate degree category, 2 semester hours in Counseling Psychology, Criminal Justice, Planned Change, Psychology, or Social Work (9/81).

## Self-Defense

Refer to Foundations of Physical Activity.

## Trainer Training in Interpersonal Communication Skills—Master Trainer Level

**Location:** New York State Department of Correctional Services Training Academy, 1134 New Scotland Road, Albany, NY.

**Length:** 168 hours; 3 days per month for 7 months.

**Dates:** April 1978—October 1978.

**Objective:** To prepare the student to become a communication skills trainer.

**Instruction:** Systematic interpersonal communication skills including: sizing up the situation (positioning, posturing, observing, and listening); communicating with inmates (responding to content feeling and asking questions); and controlling behavior (handling requests, making requests, and reinforcing behavior). Skills that relate to planning and conducting communication skills training programs on an inservice basis in correctional facilities. There is extensive use of practical case evaluations, role-play techniques, simulation, personal inventory checklists, and other laboratory-type experiences.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 6 semester hours in Behavioral Science, Communications, Counseling, or Human Services (8/78).

# NEW YORK STATE DEPARTMENT OF LABOR

The mission of the Department of Labor is to administer the State Labor Law and the rules and regulations set forth in the New York State Industrial Code. In pursuing this mission the Department seeks to attain the following goals: (1) to protect the health and safety of employees, employers, and the public from hazards arising out of employment; (2) to improve the working conditions of men, women, minors, and handicapped employees in industry and trade; (3) to broaden employment opportunities through a statewide employment service; (4) to ensure full payment of wages and employer adherence to minimum wage laws; (5) to provide benefits to workers eligible for unemployment insurance, workmen's compensation, and disability benefits; and (6) to foster peaceful relations between labor and management.

To help ensure employees' personal and career development and to meet the needs of the agency, the Department sponsors various educational training activities. These include a comprehensive program of in-service training and development involving induction training for new employees and continuing training as needed for all other employees.

Source of official student records: For metropolitan New York City—Assistant Director of Labor Training, Department of Labor, Room 3412, Two World Trade Center, New York, New York 10047; for upstate New York—Assistant Director of Labor Training, Department of Labor, State Office Building Campus, Albany, New York 12201.

## Basic Placement Training

**Location:** Various Department training facilities.

**Length:** 227 hours; 100 hours lecture, 127 hours supervised on-the-job training.

**Dates:** Janauray 1970—Present.

**Objective:** To provide the student with an orientation to the role and function of the Employment Security Placement Trainee and with the knowledge, skills, and attitudes needed to perform that assignment.

**Instruction:** Introduction to Employment Security and its programs; interviewing techniques; occupational classification and the Dictionary of Occupational Titles; job development; dynamics of the labor market; service to special applicants; introduction to testing; the Unemployment Insurance Law; Equal Employment Opportunity. The lecture-discussion approach is used, along with videotaping and role playing, and supervised on-the-job experiences.

**Credit recommendation:** In the upper division baccalaureate category, 6 semester hours in Education, Psychology, or Sociology (4 lecture, 2 laboratory); or in the graudate degree category, 3 semester hours in an Introductory Vocational Counseling Practicum (10/75). NOTE: Following the training, the student must receive a satisfactory performance evaluation in the job title to receive credit.

## Basic Unemployment Insurance Claims Training

**Location:** Various Department training facilities.

**Length:** 352 hours; 90 hours lecture, 262 hours supervised on-the-job training.

**Dates:** January 1970—Present.

**Objective:** To provide the student with an orientation to the role and function of the Employment Security Claims Trainee, and with the skills, knowledge, and attitudes necessary to perform that assignment.

**Instruction:** Interviewing skills; unemployment insurance law; adjudicative skills; using evidence in decision making; effective determination writing; State unemployment insurance policies. The lecture-discussion method is used, along with videotaping and role playing, and supervised fieldwork.

**Credit recommendation:** In the upper division baccalaureate category, 7 semester hours in Education, Psychology, or Sociology (3 lecture, 4 laboratory); or in the graduate degree category, 3 semester hours in an Introductory Vocational Counseling Practicum (10/75). NOTE: Following the training, the student must receive a satisfactory performance evaluation in the job title to receive credit.

## Fundamentals of Supervision I

**Location:** Various Department training facilities.

**Length:** 45 hours.

**Dates:** April 1973—Present.

**Objective:** To prepare first-level supervisors to perform their supervisory functions more effectively.

**Instruction:** Introductory workshop and seminar on the techniques and practice of first-level supervision in government. Combines basic organizational and behavioral theory with case studies, role-playing exercises, and experiential learning. Coverage of planning, delegation, problem solving, decision making, control methods, job improvement, staff evaluations and training, discipline, and leadership. Extensive emphasis on student participation and interaction.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Personnel Administration (10/75).

### Fundamentals of Supervision II (Professional Level)

**Location:** Various Department training facilities.

**Length:** 217 hours; 67 hours classroom, 150 hours supervised on-the-job training.

**Dates:** September 1970—Present.

**Objective:** To provide newly appointed supervisors at the first professional level with the knowledge and skills necessary to perform their supervisory tasks effectively.

**Instruction:** Workshop on the practical aspects of supervision at the first professional level in government combined with supervised fieldwork. Supervisory responsibilities; communications and staff responsibilities; techniques of auditing and performance evaluation; staff meetings; using administrative manuals; planning and delegating; analysis and utilization of control results; exercising leadership.

**Credit recommendation:** In the upper division baccalaureate category, 5 semester hours in Management (3 lecture, 2 laboratory) (10/75). NOTE: Following the training, the student must receive a satisfactory performance evaluation in the job title to receive credit.

### 1. Improving Organizational Effectiveness Through Behavioral Techniques
### 2. Perspectives in Management
### 3. Systems in Government (Selected Topics in Management)

**Location:** Department training facilities in Albany and New York, NY.

**Length:** 1. 48 hours (11 weeks).
2. 36 hours (6 weeks).
3. 30 hours (5 weeks).

**Dates:** 1. January 1978—Present.
2. January 1978—Present.
3. June 1979—Present.

**Objective:** To increase participants' awareness and application of current theories and practices of management in a public setting.

**Instruction:** Behavior modification; assertiveness training; transactional analysis; stress relief training; application of motivational theories; interpersonal communication skills for managers; problem solving and decision making; conference leadership; managing change; time management; management by objectives; labor contract administration.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Management (11/79).

### Labor Standards Investigator Basic Training

**Location:** Department training facilities in Albany and New York, NY.

**Length:** 255 hours; 105 hours classroom, 150 hours supervised on-the-job training.

**Dates:** January 1969—Present.

**Objective:** To provide the student with the knowledge and skills necessary to function as a qualified Labor Standards Investigator.

**Instruction:** Orientation to organizational missions and structures; State labor laws governing such things as minimum wages, child labor, wage payment, and hours of work; principles and techniques of investigations; preparation of written reports; interpreting written material; analyzing and evaluating evidence. Practical skill training in investigatory techniques, evaluating evidence, and report preparation.

**Credit recommendation:** In the upper division baccalaureate category, 8 semester hours in Industrial Relations (5 lecture, 3 laboratory) (10/75). NOTE: Following the training, the student must receive a satisfactory performance evaluation in the job title to receive credit.

### Perspectives in Management

Refer to Improving Organizational Effectiveness Through Behavioral Techniques.

### Seminars in Staff Development (Career Development)

**Location:** Department training facilities in Albany and New York, NY.

**Length:** 36 hours (6 weeks).

**Dates:** September 1978—Present.

**Objective:** To increase participants' understanding of the self, and of the public served by the Department of Labor.

**Instruction:** Employer-centered sales awareness; life-work planning; women in civil service.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in a non-liberal arts elective (11/79).

### Systems in Government

Refer to Improving Organizational Effectiveness Through Behavioral Techniques.

# NEW YORK STATE DEPARTMENT OF MOTOR VEHICLES

The Department of Motor Vehicles is responsible for the registration of resident motor vehicles, examination and licensing of operators, control and improvement of deficient drivers, inspection and evaluation of the mechanical condition of motor vehicles, collection and analysis of motor vehicle accident information, and management of the compulsory automobile liability insurance program. Each of these functions has a contributory role to the Department's larger responsibility for promoting automotive traffic accident prevention in the State.

To help ensure its employees' personal and career development, and to meet the needs of the agency, the Department sponsors a variety of educational and training activities.

Source of official student records: Department of Motor Vehicles, Training Section, Empire State Plaza, Swan Street Building, Albany, New York 12228.

## Concepts of Programming

**Location:** Programming Department, State Department of Motor Vehicles, Albany, NY.

**Length:** 100-120 hours; individualized program.

**Dates:** May 1969—June 1981.

**Objective:** To provide the student with the general methods and concepts used in programming.

**Instruction:** Understanding of computer hardware; flowcharting; job, task, and information management; binary and hexadecimal arithmetic. No actual programming is involved. Programmed instruction is supplemented by a 20-hour audiovisual course. There is one-to-one contact between student and instructor.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Computer Science or Data Processing (2/75).

## Programming and Debugging in Assembler Language

**Location:** Programming Department, State Department of Motor Vehicles, Albany, NY.

**Length:** 38 hours.

**Dates:** May 1969—June 1981.

**Objective:** To enable the student to write and debug programs in Assembler Language, use utility programs, and develop correct progamming concepts.

**Instruction:** Introduction and review of programming requirements (use of systems macros, catalogs, and libraries); the use of utility programs; advanced debugging techniques; analysis of system dumps. The student writes and debugs a file maintenance program. Lecture and audiovisual programs are supplemented by 350-500 hours of actual programming and on-the-job training.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Computer Science or Data Processing (2/75).

## System Control and Assembler Language Coding

**Location:** Programming Department, State Department of Motor Vehicles, Albany, NY.

**Length:** 90-100 hours; individualized program.

**Dates:** June 1969—June 1981.

**Objective:** To introduce the student to the use of Job Control Language (JCL) and coding in Assembler Language.

**Instruction:** Introductory Assembler Language coding (problem definition, flowcharting, coding, debugging, testing, and program documentation); actual programming experience and use of JCL; IBM 360/370 machine coding. Programmed instruction is supplemented by one-to-one contact between the student and instructor.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Computer Science or Data Processing (2/75).

# NEW YORK STATE DEPARTMENT OF SOCIAL SERVICES

The Department of Social Services serves New York State citizens who are in need of financial assistance, medical care, or services necessary to help them manage their lives. The Department sets standards for assistance and supervises the activities of the 58 local social services districts which are responsible for the administration of the various service programs.

The Bureau of Manpower Planning and Development with the Department is responsible for developing and implementing education and training programs for State and local staff in order to assist in achieving the mission of the social services system.

Source of official student records: Bureau of Manpower Planning and Development, Department of Social Services, 40 North Pearl Street, Albany, New York 12243.

## Administration and Organizational System

Refer to Social Welfare Administration.

## The Behavioral Approach to Management Studies

Refer to Management Systems.

## Management Systems

**(Formerly The Behavioral Approach to Management Studies)**

**Location:** Mohawk Tower, State University of New York at Albany, Albany, NY.

**Length:** 45 hours (15 weeks).

**Dates:** February 1975—June 1981.

**Objective:** To provide the student with management theory and practice as they apply to the administration of a complex organization.

**Instruction:** Human factors in management; leadership; communications; management styles; motivation; organizational development and management of change; policy issues and human resource management; assessing employee performance; employee relations; management by objectives. In addition to standardized textbooks, specialized materials have been developed within the Department to relate course content to specific departmental issues. Students are required to write two papers related to the analysis of departmental problems. Lecture and discussion are used.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Business Administration, Political Science, or Public Administration (4/75).

## Managing in Public Social Services

**Location:** Department of Social Services local offices throughout the 58 districts.

**Length:** 30 hours (106 weeks); length varies according to agency operational needs.

**Dates:** June 1975—June 1981.

**Objective:** To provide the student with the basic principles, concepts, and techniques for managing reporting persons.

**Instruction:** The facilitator focuses discussion on the manager's role in directing, interpreting, tutoring, mediating staff conflict, and suggesting proposals for change. Independent study materials are enhanced by small group discussions, filmed case studies, and in-basket exercises for the purpose of applying the basic principles to job-related situations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Supervisory Management (4/75).

## Social Welfare Administration

**(Formerly Adminstration and Organizational System)**

**Location:** Mohawk Tower, State University of New York at Albany, Albany, NY.

**Length:** 45 hours (15 weeks).

**Dates:** May 1975—June 1981.

**Objective:** To provide the student with administration and organization theory as applied to processes used by complex public organizations.

**Instruction:** The administrative process; external relations; administrative environment; financial management; personnel administration; organization and methods; executive dynamics; executive leadership. In addition to standardized textbooks, materials have been developed within the Department to relate course content to specific departmental issues. Each student is required to write a term paper focusing on the analysis of departmental problems. Lecture and discussion are used.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Political Science or Public Administration (4/75).

# NEW YORK STATE DEPARTMENT OF STATE

The Department of State is the general recording agency of New York State. Its responsibilities include being the depository of the original State land records, preparing election material for county boards of election, and filing certificates of incorporation (other than those of banking, insurance, and educational institutions). Within the Department, the Division of Fire Prevention and Control assists local communities in utilizing the resources of State government for their own benefit and in coordinating the activities of State agencies to provide more effective services to local governments.

The courses listed below are offered by the Division for professional and volunteer fire personnel throughout the State. The courses are conducted annually at the State Academy of Fire Science in Montour Falls at various times throughout the year. The Division also conducts the New York State Fire Training Program, which consists of 14 courses in standardized fire-fighting skills offered at regional locations in the State.

Source of official student records: Department of State, Division of Fire Prevention and Control, 162 Washington Avenue, Albany, New York 12231.

## Arson Investigation Course

**Location:** Academy of Fire Science, Montour Falls, NY.

**Length:** 27 hours (4½ days); residential.

**Dates:** November 1974—June 1981.

**Objective:** To provide the student with the necessary skills and techniques to conduct post-fire investigations for the purpose of determining fire causes.

**Instruction:** The history, development, and philosophy of fire investigation and detection; gathering of evidence and development of technical reports; fundamentals of arson investigation; detecting criminal evidence; criminal procedures related to various local and State statutes. (Prerequisites: "Essentials of Firemanship" and "Fire Investigation Course" of the New York State Fire Training Program.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Criminal Justice, Fire Protection Technology, or Fire Science (4/75).

## Fire Science Training Techniques

**Location:** Academy of Fire Science, Montour Falls, NY.

**Length:** 90 hours (3 years); residential, 1 week per year.

**Dates:** January 1972—June 1981.

**Objective:** To provide comprehensive training skills and evaluation techniques for experienced fire officers.

**Instruction:** Principles, structure, and practices of training necessary for fire officers to facilitate the learning process of fire service personnel. Transactional analysis; the use of training aids and resource materials; desirable characteristics in an instructor; behavior as it affects learning; development, coordination, and implementation of a fire science training program. Students participate in a group evaluation session in which each student is given a critique and then plays a role in the evaluation process. Lectures and workshops stress class participation. During this three-year program the students practice teach (approximately 300 hours) in their local districts under the supervision of field representatives.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Fire Protection Technology or Fire Science (4/75).

## Introduction to Fire Department Administration

**(Formerly Fire Department Administration)**

**Location:** Academy of Fire Science, Montour Falls, NY.

**Length: Version 1:** 44 hours (4½ days); residential.
**Version 2:** 54 hours (4 months); residential for one weekend during each of four consecutive months.

**Dates:** May 1975—June 1981.

**Objective:** To improve the administrative capabilites of fire department officers by introducing the basic concepts of supervision and providing information, background, and resources pertaining to administration.

**Instruction:** The planning, organizing, leadership, and evaluating functions of management. Management definitions and functions; fire department objectives; standards for fire protection; planning problems, phases, and guidelines; fire facilities planning; budgeting; unions and labor relations; fire department organizations; departmental structure; organizing and staffing the fire department; scope of leadership; personnel management; municipal communications; legal aspects of fire service; public relations and fire prevention; investigation practices; evaluation standards and techniques; fire service records and reports. Academy faculty and selected guest specialists use prepared lesson plans as the basis for class lectures and for student discussion, analysis, and review of the material presented. (Prerequisites: "Essentials of Firemanship," "Fire Department Management and Operations," and "Officer Training Course" of the New York State Fire Training Program.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Fire Protection Technology or Fire Science (3/77).

## Introduction to Fire Inspection

**Location:** Academy of Fire Science, Montour Falls, NY.

**Length:** 28 hours (1 week); residential.

**Dates:** February 1974 – June 1981.

**Objective:** To develop the inspection capabilities of municipal and fire service personnel.

**Instruction:** The procedures for conducting detailed and exacting inspections of all types of structures for the purpose of reducing fire losses and preventing fires. Recognition of fire hazards; development and implementation of an inspection program; review of State and national codes pertaining to fire prevention. The students are required to attend lectures and field trips to local industries and municipal buildings. After field trips, the students complete inspection reports which are reviewed and criticized by the instructor. (Prerequisites: "Essentials of Firemanship" and "Fire Inspection Practices" of the New York State Fire Training Program.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Fire Protection Technology or Fire Science (4/75).

## Introduction to Industrial Fire Protection

**Location:** Academy of Fire Science, Montour Falls, NY.

**Length:** 37½ hours (4½ days); residential.

**Dates:** March 1977 – June 1981.

**Objective:** To improve the ability of industrial fire brigade personnel to plan and administer industrial fire prevention programs through the identification of hazards, planning for emergencies, and orientation of all personnel to the proper reactions to emergencies.

**Instruction:** The course is based on the National Fire Prevention codes and on the Factory Mutual Handbook of Loss Prevention. Organizing for fire safety; nature and theory of fire; fuel loads; ordinary combustibles; flammable liquids; compressed gases; sources of ignition; special hazards; explosives, dusts, and radioactive materials; classes of fires and types of extinguishers; fire separations; fire detection and alarm equipment; water supply; automatic sprinklers; special extinguishing systems; pre-fire planning; fire attack; restoring normal operations. (Prerequisites: "Fire Inspection Practices" of the New York State Fire Training Program, or equivalent training in industrial safety and emergency preparedness.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Fire Prevention Technology or Fire Science (3/77).

# NEW YORK STATE DIVISION FOR YOUTH

The New York State Division for Youth has a broad legislative mandate to promote the physical, emotional, and social well-being of the youth in the State. Its mission is to promote, establish, and maintain a unified system of youth development and juvenile justice services which assist youth to become productive, functional, and fully integrated members of society. The Division employs approximately 3,000 persons including nearly 1,000 youth division aides in work settings at 36 residential facilities, 30 community-based facilities, and numerous field and district offices.

The Staff Development and Training Unit provides entry-level training for new personnel, inservice programs for permanent staff, and management and administrative training programs. Tuition support programs and requests for services provided by higher education institutions and professional associations are also coordinated by this unit.

Source of official student records: Director of Training, Division for Youth, 84 Holland Avenue, Albany, New York 12208.

## 1. Introduction to Basic Childcare Management
## 2. Basic Childcare Management I
## 3. Basic Childcare Management II

**Location:** Various Division for Youth facilities throughout New York State.

**Length:** 1. Minimum of 6 hours.
2. Minimum of 45 hours.
3. Minimum of 60 hours.

**Dates:** October 1980—Present.

**Objective: Course 1:** To orient students to the role of the childcare worker as a professional. **Course 2:** To acquaint students with child development theory and the ways to apply this theory in working with the basic needs of delinquent youth in institutional care facilities. **Course 3:** To develop students' understanding of the ways to work with the educational and interpersonal needs of delinquent youth in institutional care facilities.

**Instruction: Course 1:** Identification of learning styles; self-assessment; roles of the childcare worker. **Course 2:** Survey of the following topics: psychological, physiological, intellectual, social, and moral development of youth; motivation; self-awareness; hierarchy of needs; needs of exceptional children; concepts of crisis control; use of self in work with youth. (Prerequisite: Introduction to Basic Childcare Management.) **Course 3:** Introduction to the concepts and techniques used to promote the emotional growth, social skills, interpersonal relationships, and communication skills of youth. Leadership and management skills in group dynamics and supervision; childcare techniques in working in working with delinquent youth. (Prerequisite: Introduction to Basic Childcare Management.)

**Credit recommendation: Courses 1 and 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Applied Behavioral Sciences, Childcare, or Human Services (3/81). NOTE: Courses 1 and 2 must both be completed to receive credit. **Courses 1 and 3:** In the lower division baccalaureate/associate degree category, 3 semester hours in Applied Behavioral Sciences, Childcare, or Human Services (3/81). NOTE: Courses 1 and 3 must both be completed to receive credit.

# NEW YORK STATE DIVISION OF CRIMINAL JUSTICE SERVICES–BUREAU FOR MUNICIPAL POLICE

The New York State Executive Department's Division of Criminal Justice Services comprises three orgnizations, one of which is the Bureau for Municipal Police. Working with the guidance of the Municipal Police Training Council (MPTC) in matters of policy, the Bureau is responsible for administering training for all local law enforcement officers outside New York City.

Courses are conducted on a regional basis in order to foster interdepartmental cooperation and enable new officers to understand the interrelationships within the criminal justice system. The Bureau's mandated training programs are a basic course for entry-level police officers and a supervisory course for first-line supervisors. The Bureau also conducts courses which are not mandated, such as intermediate and advanced inservice courses, latent fingerprint, police photography, and police traffic services.

Source of official student records: Deputy Commissioner, Division of Criminal Justice Services, Executive Park Tower, Stuyvesant Plaza, Albany, New York 12203.

## Police Instructor Development Seminar

**Location:** Locations throughout New York State.

**Length:** 70 hours (2 weeks).

**Dates:** October 1976–Present.

**Objective:** To develop the pedagogical skills of the police officer who has been selected as an instructor.

**Instruction:** Role of the instructor; defining training needs; writing instructional objectives; oral communication; psychology of learning; audiovisual aids; instructional techniques; lesson plans; evaluation and test construction; instructor-trainee interaction; record keeping. The course consists of forty hours of lectures and discussion and thirty hours of workshops, practical exercises, and oral presentations which are videotaped and critiqued.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Education, or as an elective in Corrections Administration, Criminal Justice, or Police Science(5/77).

# NEW YORK STATE DIVISION OF STATE POLICE

The Division of State Police is responsible for rendering police services to all the people of New York State. There are nearly 3,800 men and women working throughout ten Troop areas. With the exception of the Thruway Troop and Troop L (Long Island), each Troop is specifically responsible for policing approximately eight to ten counties. In 1935, a Detective Force was created to be responsible for the investigation of all major crimes; this unit is now known as the Bureau of Criminal Investigation.

Training programs date back to the inception of the Division in 1917. In May 1970, the State Police Academy opened on the State Campus in Albany. This was the first time that the Division had a facility of its own devoted exclusively to its training requirements. In addition to the Basic Recruit Program, the Academy conducts in-service courses for State Police officers and representatives from other law enforcement agencies. The aim is to enable officers to keep abreast of the ever-changing field of law enforcement while simultaneously upgrading their skills in such areas as police administration and criminal investigation.

Source of official student records: Director of Training, State Police Academy, State Campus, Albany, New York, 12226.

## BASIC RECRUIT PROGRAM

The courses listed below constitute the academic component of the Basic Recruit Program conducted at the Police Academy. This is an intensive 22-week residential program attended by all newly appointed troopers of the State Police. The total program as presently constituted has been offered since October 1971, although individual courses have been offered with substantially the same content for a longer period of time; this is noted for the specific courses.

### 1. Accident Investigation
### 2. Vehicle and Traffic Law I
### 3. Vehicle and Traffic Law II

**Length:** 100 hours.

**Dates:** September 1961 – Present.

**Objective:** To provide the student with knowledge of the New York State Traffic Laws, Federal standards, codes, and laws, and terminology contained in the Vehicle and Traffic Law.

**Instruction:** The procedures and standards of proof required in related judicial proceedings (rules of the road, vehicle and traffic accusatory instruments, and bills of particulars); treatment of latest methods of accident investigation (identification of primary and secondary causes of accidents). A laboratory experience is provided with strong emphasis on Driving While Intoxicated Enforcement.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Vehicle and Traffic Law (3/74). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Community Relations for Police

**Length:** 40 hours.

**Dates:** June 1964 – Present.

**Objective:** To provide the student with a multidimensional survey of police/community relations.

**Instruction:** The role of the police in community relations; the psychological and sociological aspects of human relations; the nature of prejudice and discrimination in police work; the development of the police image and a recognition of the importance of commuications with the public; civil disobedience; police corruption and police professionalism.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in The Police and The Community (3/74).

### Consolidated Laws and Procedures

**Length:** **Version 1:** 36 hours.
**Version 2:** 40 hours.

**Dates:** **Version 1:** June 1964 – October 1974.
**Version 2:** November 1974 – Present.

**Objective:** To provide an overview of the Consolidated Laws and Procedures of New York State and selected Federal statutes in which there is a concurrent enforcement responsibility.

**Instruction:** Bail; family court and offenses against the court; conservation law; State and Federal probation; pardon and parole; Federal enforcement agencies; the District Attorney, Public Defender, and County Court Judge; Supreme Court decisions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Consolidated Laws and Procedures (3/74).

### Criminal Investigations

**Length:** **Version 1:** 60 hours.
**Version 2:** 64 hours.
**Dates:** **Version 1:** June 1964–October 1974.
**Version 2:** November 1974–Present.

**Objective:** To provide knowledge and skills necessary to conduct a sound police investigation.

**Instruction:** General principles; preliminary investigation; collection and preservation of information; sources of information. In addition to general investigative techniques, emphasis is placed on those types of criminal activities which require specialized methods of investigation. A laboratory experience is provided through the Practical Case Exercise in which investigative techniques are applied directly to situations that actually occur in field assignments.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Criminal Justice (3/74).

### Criminal Law

**Length:** 60 hours.

**Dates:** September 1961–Present.

**Objective:** To provide an introduction to the New York State Penal Law.

**Instruction:** The New York State Penal Law (its purposes and those definitions applicable to enforcement considerations); the elements of various offenses (anticipatory offenses, theft, fraud, damage and intrusion onto poperty, and offenses against the person and public order); the legal basis for proscribing conduct; the justification for the lawful use of physical force.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Criminal Law (3/74).

### Criminal Procedure Law

**Length:** 60 hours.

**Dates:** September 1961–Present.

**Objective:** To provide an introdution to Criminal Procedure Law.

**Instruction:** Working knowledge of procedures and standards of proof required for preliminary judicial action in the lower or local court (geographical jurisdiction of offenses, scope of prosecution, and rules of evidence); procedures related to arrest for an offense from the time of arrest through sentencing and probation procedures (laws of arrest, proceedings from arraingment to plea, and search and seizure).

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Criminal Procedure Law (3/74).

### Emergency Services School

**Length:** **Version 1:** 40 hours.
**Version 2:** 62 hours.
**Dates:** **Version 1:** June 1964–October 1974.
**Version 2:** November 1974–Present.

**Objective:** To provide knowledge and skills necessary for the student to effectively handle emergency situations.

**Instruction:** Knowledge and skills necessary to handle situations requiring immediate action to safeguard life and property or prevent further hazards to either. Emergencies involving public utilities, dangerous materials, extrications, and search and recovery operations. **Version 2:** Approximately two-thirds of the course is devoted to advanced first aid and crash injury management.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Criminal Justice (3/74).

### Introduction to Law Enforcement and Government

**Length:** 40 hours.

**Dates:** October 1971–Present.

**Objective:** To provide an understanding of the organization and functions of Federal, State, and local governments and an introduction to Federal and State Constitutional Law.

**Instruction:** Examination of the organization and functions of government at the Federal, State, and local levels, with emphasis on those governmental operations which directly affect the field of law enforcement; basic introduction to Federal and State Constitutional Law. The dimensions, operations, and alternatives presented by the criminal justice system (the police function, the judicial function, and the correctional process).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Introduction to Law Enforcement; or in the upper division baccalaureate category, credit on the basis of institutional examination (3/74).

### Vehicle and Traffic Law I

Refer to Accident Investigation.

### Vehicle and Traffic Law II

Refer to Accident Investigation.

# INSERVICE COURSES

## Basic Supervisory Administration
## 1. Inservice Training for Noncommissioned Officers
## 2. Noncommissioned Officers Course

**Location:** State Police Academy, State Campus, Albany, NY.

**Length:** 1. 32 hours (1 week); residential.
2. 64 hours (2 weeks); residential.

**Dates:** July 1974—Present.

**Objective:** To acquaint the student with management concepts and principles of leadership in police administration.

**Instruction:** First-line supervisory training. Administrative procedures; supervision; leadership; grievance and disciplinary problems; techniques of improving morale and motivation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Police Management and Supervision (2/75).

## Criminal Investigations II

**Location:** State Police Academy, State Campus, Albany, NY.

**Length:** 64 hours (2 weeks); residential.

**Dates:** January 1964—Present.

**Objective:** To introduce the new criminal investigator to the methods and techniques employed in the investigation of crimes and to other appropriate law enforcement methods.

**Instruction:** An advanced course in criminal investigation for the new investigator. Review of the basic principles of investigation; advanced instruction in the investigative techniques relating to serious crimes (homicide, arson, sex crimes, and gambling).

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Criminal Justice. NOTE: For students from other [illegible] enforcement agencies who attend only the second week of the course, 1 semester hour of credit is reommended (2/75).

## Inservice Training for Noncommissioned Officers

Refer to Basic Supervisory Administration.

## Noncommissioned Officers Course

Refer to Basic Supervisory Administration.

# NEW YORK STATE DIVISION OF SUBSTANCE ABUSE SERVICES

The Division of Substance Abuse Services of the New York State Office of Alcoholism and Substance Abuse is responsible for the supervision of programs for the treatment and rehabilitation of substance abusers in New York State. The Division, formerly known as the New York State Office of Drug Abuse Services, operated as an autonomous division within the New York State Department of Mental Hygiene until that Department's reorganization effective April 1, 1978.

The Division operates a Bureau of Training and Resource Development which offers training both to the employees of the Division and to persons working in private substance abuse programs throughout the State. These staff development activities, directed toward job development and personal growth, are offered at a variety of locations throughout the State.

Source of official student records: Supervisor of Training and Resource Development, Bureau of Training and Resource Development, 350 Broadway, Fourth Floor, New York, New York 10013.

### Advanced Seminar in Personality Dynamics and Treatment Techniques with Drug Abusers

**Location:** Queensboro Community Rehabilitation Center, 47-04 Van Dam Street, Long Island City, NY.

**Length:** 45 hours (30 weeks).

**Dates:** September 1974—June 1976.

**Objective:** To enhance the student's knowledge of personality dynamics and interpersonal skills by building upon the foundations of basic theory and knowledge in personality dynamics, psychopathology, and treatment techniques.

**Instruction:** An intensive integration of theory and skills in the treatment process. Interview techniques; transference and countertransference phenomena; personality structure; ego pathology in drug abuse; dynamics of drug abuse. Course format includes group discussion of case material presented by students, role playing, selected readings, and interview tutorials with the seminar leader. (Prerequisite: Seminar in Personality Development, Psychopathology, and Treatment Techniques.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Counseling, Psychology, or Social Work (3/75).

### Assessment Interviewing for Treatment Planning

**Location:** Training sites throughout New York State: Albany, Buffalo, Islip, New York City, Rochester, Syracuse, White Plains.

**Length:** 32 hours (4 days).

**Dates:** January 1976—Present.

**Objective:** To provide counselors with a systematic approach to assessment interviewing and developing treatment plans.

**Instruction:** The focused interview as a basis for information gathering and client assessment; interviewing skills; case histories; recording; treatment planning. Introduces confidentiality and psychometric testing. Lecture, discussion, videotapes, and small-group method are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Behavioral Science, Human Services, or Social Work (12/77).

### Basic Issues in the Treatment of Women Substance Abusers

**Location:** Training sites throughout New York State.

**Length:** 16 hours (2 days).

**Dates:** December 1977—October 1979.

**Objective:** To provide participants with an overview of the issues and problems of women and, in particular, how the understanding of these matters can facilitate the counseling process.

**Instruction:** Awareness of the counselor's attitudes about women, with specific reference to women addicts; the influence of those attitudes on treatment; current modalities in women's treatment; particular needs and problems of women in treatment. Methodology includes experiential exercises, self-instruction materials. Discussions, slide presentations and selected readings in current research.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Behavioral Science, Human Services, or Social Work (12/77).

### Basic Management Skills

**Location:** Training sites throughout New York State: Albany, Buffalo, Islip, New York City, Rochester, Syracuse, White Plains.

**Length:** 40 hours (5 days).

**Dates:** October 1977—October 1978.

**Objective:** To provide an understanding of the manager's role in an organization and of the principles of effective and efficient management.

**Instruction:** The manager's job; management theory; the systems approach; the planning process; basic management functions; service unit costing; substance abuse program assessment; information gathering and decisionmaking; personnel issues; cost-saving measures; delegation of responsibility and authority. Lectures, discussion, case studies, and small-group method are used.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Behavioral Science, Human Resources, Management, Social Work, or Urban Studies(12/77).

## Black and Puerto Rican Americans and American Social Institutions

**Location:** Ridge Hill Rehabilitation Center, Yonkers, NY.

**Length:** 36 hours (12 weeks).

**Dates:** May 1975—June 1976.

**Objective:** To provide the student with information on some selected factors relating to black and Puerto Rican life experience that may relate to the lives and behavior of currently institutionalized residents.

**Instruction:** Examination of issues which contribute to the disproportionately high rates of unemployment, poverty, family disruption, and involvement in crimes and delinquency among blacks and Puerto Ricans. Instructional format is primarily lecture and discussion.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Social Science (7/75).

## Booze: Mankind's Oldest Problem Drug (AK 107)

**Location:** Arthur Kill Community Rehabilitation Center, 2911 Arthur Kill Road, Staten Island, NY.

**Length:** 30 hours (15 weeks).

**Dates:** October 1973—June 1976.

**Objective:** To provide the student with information about alcohol viewed as a drug and alcoholism as an addictive disorder.

**Instruction:** Alcohol as a substance (its pharmacology, history, culture, psychology, scope, and species); alcoholism as an addictive disorder; its relationship to other addictive disorders.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Counseling, Psychology, Social Work, or Sociology (7/75).

## Counselor Training: Short-Term Client Systems

**Location:** Training sites throughout New York State: Albany, Buffalo, Islip, New York City, Rochester, Syracuse, White Plains.

**Length:** 40 hours (5 days).

**Dates:** May 1976—Present.

**Objective:** To provide counselors with an understanding of, and practice in, counseling techniques.

**Instruction:** The essential components of the helping relationship: establishing rapport and trust; hearing and responding to affective and cognitive data; exploring values and attitudes; initiating the problem-solving process. Emphasizes the development of counseling skills through lecture, discussion, and actual counseling sessions under the guidance of trainers.

**Credit recommendation:** In the upper divison baccalaureate category, 2 semester hours in Behavioral Science, Human Services, or Social Work (12/77).

## Drugs: Their Use and Abuse

**Location:** Bushwick Rehabilitation Center, 41-49 Howard Avenue, Brooklyn, NY.

**Length:** 45 hours (15 weeks).

**Dates:** September 1975—June 1976.

**Objective:** To provide the student with an overview of the psychological, sociological, physiological, and legal aspects of drug abuse, and an examination of the current major modalities of treatment.

**Instruction:** An examination and review of the major substances of abuse (including hallucinogens, narcotics, and alcohol). Through use of lectures, guest experts, films, and field trips, the student is exposed to the many ramifications of current drug use and abuse and is given a critical evaluation of current major treatment modalities. Life style alternatives to drug abuse and addicition are explored.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Behavioral Science, Community Mental Health, Counseling, Education, Psychology, or Sociology (2/76).

## Experiential Seminar in Behavior Therapy Techniques

**Location:** Otisville Rehabilitation Center, Otisville, NY.

**Length:** 30 hours (1 week).

**Dates:** April 1974—June 1976.

**Objective:** To have students learn and experience principles and techniques of behavior therapy.

**Instruction:** Orientation to, and history of, behavior therapy; techniques of relaxation, desensitization, self-image training, behavior analysis, behavior control, assertive training, and rational thinking. Behavior therapy techniques are explored through lectures, self-application, role playing, and group discussion.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semster hours in Applied Behavioral Sciences (3/75).

### Introduction to Behavioral Dynamics

**Location:** Ridge Hill Rehabilitation Center, Yonkers, NY.

**Length:** 36 hours (12 weeks).

**Dates:** May 1975—June 1976.

**Objective:** To introduce the student to the psychodynamic and learning theory models of personality development.

**Instruction:** Psychodynamic and learning theory models are used to illustrate divergent theories of psychopathology and to help explain such clinical phenomena as depression and suicide. Personality assessment tools, psychological testing methods, and various treatment approaches are examined. Films, lectures, selected readings, group discussons, and case studies are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Psychology (7/75).

### Introduction to Behavioral Techniques (AK 102)

**Location:** Arthur Kill Community Rehabilitation Center, 2911 Arthur Kill Road, Staten Island, NY.

**Length:** 60 hours (15 weeks).

**Dates:** May 1974—June 1976.

**Objective:** To improve the student's interpersonal relationships by providing a better understanding of counseling techniques and specific behavioral techniques which are useful with both individuals and groups.

**Instruction:** The course is designed to teach basic group skills. A minimum of behavioral and learning theory concepts are combined with a maximum of technique and practical application. The emphasis is on the use of group skills with drug addicts in a confined setting.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Applied Behavioral Sciences (3/75).

### Introduction to Communication Skills (AK 101)

**Location:** Arthur Kill Community Rehabilitation Center, 2911 Arthur Kill Road, Staten Island, NY.

**Length:** 15 hours (15 weeks).

**Dates:** June 1974—June 1976.

**Objective:** To solve problems in staff communications and to teach basic communication skills.

**Instruction:** An approach to communications from a problem-solving position. Defintion of communications as any transaction between human beings; consideration of the most common problems in communications within organizations. Practical exercises are used to enhance communication skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Applied Behavioral Sciences or Communications (3/75).

### Introduction to Group Counseling

**Location:** Ridge Hill Rehabilitation Center, Yonkers, NY.

**Length:** 48 hours (14 weeks); includes 6 hours of laboratory exercises.

**Dates:** November 1974—June 1976.

**Objective:** To familiarize the student with knowledge and skills of group counseling dynamics and techniques so that he/she can function as an aide to the group leader in a resident treatment group.

**Instruction:** An overview of group counseling dynamics and techniques for use with institutionalized substance abusers. Problems and issues of group counseling are treated through the use of videotape presentations, one-way mirror observations, role-play exercises, and related exercises. Lectures, selected readings, and group experiences are also used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Psychology, Social Science, or Social Work (7/75).

### Introduction to Techniques of Behavior Modification (AK 109)

**Location:** Arthur Kill Rehabilitation Center, 2911 Arthur Kill Road, Staten Island, NY.

**Length:** 40 hours (5 weeks).

**Dates:** November 1975—June 1976.

**Objective:** To provide the student with an understanding of some of the basic theories and techniques in behavior modification and how they can be used in treatment settings dealing with substance abusers.

**Instruction:** Introduction to some basic behavioral modificaton techniques: relaxation, desensitization, self-image development, self-assertion, and behavior analysis. Presented in an experiential framework of demonstration and participation, as well as lecture.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Behavioral Sciences (2/76).

### Orientation to Substance Abuse: Its Nature and Treatment (AK 108)

**Location:** Arthur Kill Community Rehabilitation Center, 2911 Arthur Kill Road, Staten Island, NY.

**Length:** 30 hours (20 weeks).

**Dates:** September 1975—June 1976.

**Objective:** To orient the student to the nature of abused substances and the treatment modalities for drug and alcohol abuse.

**Instruction:** Survey of the nature and function of abused substances, particularly drugs and alcohol; consideration of the pharmacology of abused substances, the type of abusers, related cultural factors, and how these may influence treatment and referral.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category (introductory), 3 semester hours in Counseling, Psychology, Social Work, or Sociology (7/75).

## Overview of Substance Abuse

**Location:** Training sites throughout New York State.

**Length:** 24 hours (3 days).

**Dates:** December 1977—Present.

**Objective:** To provide a basic understanding of the varieties of drugs available, and their use and abuse.

**Instruction:** Overview of the history of substance abuse; psychopharmacology; the social, cultural, and individual factors affecting substance abuse. Films and self-instructional materials are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Behavioral Science or Social Science (12/77).

## Preparing the Ex-Addict for Employment

**(Offered in cooperation with Provide Addict Care Today, Inc./National Association on Drug Abuse Problems, Inc.)**

**Location:** Various corporate training facilities in New York City.

**Length:** 18 hours (6 weeks).

**Dates:** December 1977—December 1978.

**Objective:** To provide participants with an understanding of basic concepts in vocational rehabilitation, especially as they relate to ex-addict clients.

**Instruction:** Introduction to the vocational rehabilitation process, including the role of the counselor; review of case histories and treatment plans; hiring practices in various types of businesses in New York City; legal issues in vocational rehabilitation counseling with drug abuse clients. Use of guest lecturers, group discussions, and role playing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Behavioral Science, Human Services, or Social Work (12/77).

## Puerto Rican History and Culture Workshop—An Overview

**Location:** Training sites throughout New York State.

**Length:** 16 hours (2 days).

**Dates:** December 1977—May 1981.

**Objective:** To provide a basic introduction to Puerto Rican history and culture, with a focus on specific concerns in the treatment of Puerto Rican clients.

**Instruction:** Examination of the Indian, African, and Spanish heritage in the formation of the Puerto Rican nation; patterns of migration; the culture, family structure, and employment patterns of Puerto Ricans in the United States; problems and issues involved in dealing with Puerto Rican substance abusers. Use of lectures, group discussions, films, and case histories.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Social Science (12/77).

## Seminar in Group Psychotherapy

**Location:** Queensboro Community Rehabilitation Center, 47-04 Van Dam Street, Long Island City, NY.

**Length:** 45 hours (30 weeks).

**Dates:** January 1974—June 1976.

**Objective:** To enhance the student's knowledge, attitudes, and skills in the use of group therapy techniques.

**Instruction:** Analysis of tape-recorded sessions which examine processes of group formation, group dynamics, intervention techniques, special problem clients, problems of transference and countertransference. As part of the seminar, staff members with different levels of experience work together as co-leaders of residential and aftercare groups. Relevant readings are assigned and individual tutorials are held to facilitate student presentation of taped materials.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category (introductory), 3 semester hours in Counseling, Psychology, or Social Work (3/75).

## Seminar in Milieu Treatment Approaches

**Location:** Queensboro Community Rehabilitation Center, 47-04 Van Dam Street, Long Island City, NY.

**Length:** 45 hours (30 weeks).

**Dates:** January 1974—June 1976.

**Objective:** To prepare the worker to assume an appropriate role as a member of a treatment team by laying a foundation in mental hygiene concepts and practices.

**Instruction:** Basic introduction to personality development, psychopathology, and treatment techniques. The focus of the course is on the self-image of the correction officer and his knowledge, attitudes, and skills in communicating with clients and colleagues. Critical incidents are presented by members, and role playing is used to practice new skills in appropriate interventions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Applied Behavioral Sciences (3/75).

### Seminar in Personality Development, Psychopathology, and Treatment Techniques

**Location:** Queensboro Community Rehabilitation Center, 47-04 Van Dam Street, Long Island City, NY.

**Length:** 45 hours (30 weeks).

**Dates:** November 1973—June 1976.

**Objective:** To provide basic theoretical knowledge and skills practice in the areas of personality assessment and treatment techniques.

**Instruction:** Theoretical and practical experience in differential diagnosis, treatment planning, and the delivery of services via the staff/client relationship; theoretical models for diagnosis and treatment of personality disorders; appropriate utilization of rehabilitation center facilities and services for clients within the community. Instruction includes group discussion, written and taped material presented by the participants, skills practice and readings in personality dynamics and treatment of drug abusers.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Counseling, Psychology, or Social Work (3/75).

### Seminar in Psychopathology and Group Treatment Modalities (AK 104)

**Location:** Arthur Kill Community Rehabilitation Center, 2911 Arthur Kill Road, Staten Island, NY.

**Length:** 46 hours (23 weeks).

**Dates:** September 1974—June 1976.

**Objective:** To review basic concepts in psychodynamics, psychopathology, and drug abuse; to enable participants to demonstrate knowledge of the principal group therapy approaches and make judgments about their usefulness; to teach the application of basic understanding of human behavior in clinical settings.

**Instruction:** Basic principles of human development according to Freud, Erikson, and Piaget; classic concepts in pathology (neurosis, psychosis, and character disorder); basic approaches to group therapy (analytical, behavioral, Rogerian, transactional, sensitivity, self-actualization, and reality therapy).

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category (introductory), 3 semester hours in Counseling, Psychology, or Social Work (3/75).

### Training of Trainers

**Location:** Training sites throughout New York State: Albany, Buffalo, Islip, New York City, Rochester, Syracuse, White Plains.

**Length:** 40 hours (5 days).

**Dates:** June 1976—Present.

**Objective:** To provide trainers experienced in the substance abuse field with additional knowledge in training theories and design and in the use of laboratory methods.

**Instruction:** Self-assessment of design and delivery skills, and of personal learning styles; learning theory; training design; techniques for presenting information; dynamics of group process; assessment of group learning situations. Lectures and discussion are used with emphasis on small-group experience.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavioral Science, Education, Human Services, or Social Work (12/77).

### Vocational Rehabilitation in the Treatment Setting

**Location:** Training sites throughout New York State: Albany, Buffalo, Islip, New York City, Rochester, Syracuse, White Plains.

**Length:** 45 hours (5 days).

**Dates:** January 1976—November 1978.

**Objective:** To increase the counselor's understanding of vocational rehabilitation as it relates to substance abusers.

**Instruction:** Role and function of vocational rehabilitation specialists; development of skills in assessing client needs; providing guidance, support, and follow-up; problem identification and action planning. Lectures, videotapes, and discussions are used.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Behavioral Science, Human Services, or Social Work (12/77).

### Women in Treatment I

**Location:** Training sites throughout New York State: Albany, Buffalo, Islip, New York City, Rochester, Syracuse, White Plains.

**Length:** 32 hours (4 days).

**Dates:** August 1976—March 1979.

**Objective:** To enable counselors and supervisors in substance abuse treatment programs to work more effectively with women in substance abuse treatment programs by increasing their awareness of attitudes toward women and the influence of such attitudes on treatment.

**Instruction:** Myths and stereotypes about women; characteristics of the female addict; counselor-client interaction; treatment planning, design, and delivery; use of individual and group techniques and structured experiences in assisting women clients to achieve treatment goals. Lecture, discussion, simulations, and small-group method are used.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavioral Science, Human Services, or Social Work (12/77).

### Women in Treatment II

**Location:** Training sites throughout New York State: Albany, Buffalo, Islip, New York City, Rochester, Syracuse, White Plains.

**Length:** 35 hours (4 days)

**Dates:** March 1979—Present.

**Objective:** To provide participants with knowledge about drug use among women, the physical, psychological and sociological factors at each life stage, current treatments, and improving treatment for women. Discusses the effects of racial, cultural, sexual, and class distinction factors on the treatment of women.

**Instruction:** Patterns of drug abuse among women; women's life cycle and life stress; life stress counseling theory; family systems theory; special issues of suicide; victimization; sexuality and health; assessment of critical program components and resource networks; application of principles of counseling women. Lecture, discussion, simulation, and small group exercises are used.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavioral Science, Human Services, Social Work, Sociology, or Women's Studies (5/80).

*The following courses have been evaluated and recommended for credit by the American Council on Education Program on Noncollegiate Sponsored Instruction. For additional information about these courses, contact the American Council on Education Program on Noncollegiate Sponsored Instruction, Office on Educational Credit and Credentials, American Council on Education, One Dupont Circle, Washington, D. C. 20036.*

Source of official student records: NMTS Registrar, Career Development Center, Suite 231, 11325 Seven Locks Road, Potomac, Maryland 20854.

Additional information about the courses: Program on Noncollegiate Sponsored Instruction, Office on Educational Credit and Credentials, American Council on Education, One Dupont Circle, Washington, D. C. 20036.

### Family Counseling (Family Counselor Development)

**Location:** Division of Substance Abuse Services, Bureau of Training and Resource Development, New York, NY.

**Length:** 35 hours (5 days).

**Dates:** June 1981—Present.

**Objective:** To enable participants to become familiar with family systems theory and gain skills required for appropriate family counseling.

**Instruction:** Covers history, background and theory of family therapy; family systems theory: structure, process, family sculpting, tracing family history; developmental stages of families: normative stages, family life communication, intervention skills; family counseling process: assessment, contract, treatment; assessing families: communication patterns, roles, decision-making and authority; intake process: engaging the family, identifying the problem; treatment: cultural setting and task setting. Lecture, discussion, and role-playing are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Behavioral Science or Education (Counseling) (7/81).

### The Group Process (Group Counseling: A Focus on Group Process)

**Location:** Division of Substance Abuse Services, Bureau of Training and Resource Development, New York, NY.

**Length:** 35 hours (5 days).

**Dates:** June 1981—Present.

**Objective:** To give participants an understanding of processes that occur within a group counseling setting and the effect of those processes on individual behavior.

**Instruction:** Covers key concepts and issues related to group theory including examination of the group as a system, small group experiences, stages of group development, leader interventions, group formation, and application groups. Groups are examined from a classical T-Group frame of reference. Lecture, discussion, and role-playing are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Human Services (7/81).

## Supervision of Clinical Counselors (Clinical Supervision)

**Location:** Division of Substance Abuse Services, Bureau of Training and Resource Development, New York, NY.

**Length:** 35 hours (5 days).

**Dates:** June 1981—Present.

**Objective:** To provide participants with an understanding of the basic concepts, principles, and strategies of effective supervision of clinical counselors.

**Instruction:** Covers basic concepts of supervision, the clinical rhombus, supervision as an element of the total system, learning and teaching patterns, traits of the effective supervisory interview process, and models and strategies of supervision. Lecture, discussion, and role playing are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Human Services (7/81).

## Working With Adolescents

**Location:** Division of Substance Abuse Services, Bureau of Training and Resource Development, New York, NY.

**Length:** 28 hours (5 days).

**Dates:** June 1981—Present.

**Objective:** To provide participants with an increased understanding of adolescents with regard to developmental and systemic factors of adolescent behavior and attitudes about working with adolescents.

**Instruction:** Covers definition of adolescence, attitudes towards adolescents, developmental theories and tasks of adolescence, adolescence from a systems perspective, stereotyping and labeling, values, current research on adolescent substance abuse, perceptions of parents and relationship to substance abuse, ecomap as an assessment tool, individual counseling with adolescents, sexuality as a treatment issue, group development and resource sharing. Lecture, discussion, and role playing are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Behavioral Science (7/81). NOTE: Course could be substituted for Adolescent Psychology or Counseling.

# NEW YORK STATE OFFICE OF MENTAL HEALTH

The New York State Office of Mental Health is responsible for the delivery of a wide range of services to the mentally ill. It serves clients in all parts of the State through local and regional psychiatric centers.

The Title XX Program of the Office of Mental Health develops educational and training programs for staff persons working with mentally ill clients in community settings. A variety of such programs are offered to many types of service providers.

Source of official student records: For students completing the course at psychiatric centers—Director of Education and Training at the specific psychiatric center; for students completing the course at other locations—Case Management Training Program Coordinator, Title XX Training Unit, New York State Office of Mental Health, 44 Holland Avenue, Albany, New York 12229.

## Case Management Services in Community Support Systems

**Location:** Binghamton Psychiatric Center, Binghamton, NY; Buffalo Psychiatric Center, Buffalo, NY; Gowanda Psychiatric Center, Helmuth, NY; Hudson River Psychiatric Center, Poughkeepsie, NY; Hutchings Psychiatric Center, Syracuse, NY; Kings Park Psychiatric Center, Kings Park, NY; Middletown Psychiatric Center, Middletown, NY; Pilgrim Psychiatric Center, West Brentwood, NY; Rochester Psychiatric Center, Rochester, NY; St. Lawrence Psychiatric Center, Ogdensburg, NY; Willard Psychiatric Center, Willard, NY; various Title XX training locations throughout New York State.

**Length:** 70 hours (14 weeks); 70-hour practicum is required in addition to the classroom work.

**Dates:** September 1978—Present.

**Objective:** To provide the course participant with the knowledge and skills necessary to assist clients within the mental health system to be self-sufficient.

**Instruction:** The role and function of the case manager in community support systems; the effects of institutionalization on the client; orientation to, and use of, community resources; facilitative interpersonal skills; client advocacy. A supervised work experience is required.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Human Services, Nursing, Psychology, Social Sciences, or Sociology (10/79).

# NEW YORK TELEPHONE COMPANY

The New York Telephone Company, which employs over 77,000 throughout the State, is part of the nationwide Bell System. The company provides communication services to over six million customers in New York State and Greenwich, Connecticut. Services range from basic home telephone services to complete business communication systems. Telephone facilities transmit voice, television, and other pictures, as well as coded symbols and data between people, computers, and business machines.

The company has developed courses in many different areas to provide employees with an opportunity to receive appropriate training at various intervals in their careers. Courses focus on developing the technical, administrative, and managerial skills that are most relevant to the job being performed. There are also courses in the area of personal development. While the courses reviewed vary in length, in all cases the participating employees are released from other job responsibilities to attend.

Source of official student records: College Credit Evaluation Program, New York Telephone Company, Room 1330, 11 West 42nd Street, New York, New York 10036.

## Accounting for Engineers (4031)

**Location:** Corporate Learning Center Engineering School, Hotel Thayer, West Point, NY.

**Length:** 32 hours (5 days); residential.

**Dates:** July 1972—December 1979.

**Objective:** To provide knowledge of basic accounting principles, with specific reference to engineering.

**Instruction:** Business and the need for accounting; double-entry bookkeeping; balance sheets; income statements and other financial reports; depreciation; accounting methods and procedures; expenditure control; division of revenue.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Basic Accounting Principles for Engineers (9/75).

## Accounting Manager's Workshop (1007)

**Location:** Overlook Lodge, Bear Mountain, NY; Holiday Inn, Orangeburg, NY.

**Length:** 32 hours (4½ days); residential.

**Dates:** December 1970—Present.

**Objective:** To increase the second-line manager's motivation, leadership skills, and acceptance of his/her basic accountability for meeting company and customer needs.

**Instruction:** Motivation; leadership; listening; problem solving; Linking Pin Theory; McGregor's Theory X & Y; appraisal techniques; time management; goals and operant management (positive reinforcement). Methodology consists of lecturette, films, and video role playing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Management (11/74).

## Advanced Data Training (A0000)

**Location:** 10 Columbus Circle, New York, NY.

**Length:** 90 hours (2 weeks).

**Dates:** June 1971—January 1975.

**Objective:** To equip communications consultants, account consultants, and sales managers with the knowledge necessary to recognize and satisfy business needs in the data market by providing efficient and effective communications.

**Instruction:** Fundamentals of computer systems; input-output systems and their operation; information storage and retrieval; computer programming; computer concepts, time sharing, data transmission, and data switching; computer language from simple binary numbers to twelve-level codes.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Computer Fundamentals (3/74).

## A. T. & T. Manager Training Course (3002)

**Location:** 11 West 42nd Street, New York, NY.

**Length:** 105 hours (15 days).

**Dates:** January 1970—Present.

**Objective:** To equip the new middle-level manager with the technical, administrative, and managerial skills necessary for effective middle-level management of a business office.

**Instruction:** Corporate finance; accounting methodology; labor relations; management by objectives; motivation; planning; decision making; performance appraisal; credit and collections. Application of theory is based on current thinking of behavioral psychologists. Methodology includes lectures, self-paced programmed instruction, group discussions, projects, role playing, and films.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Management Practices; or in the graduate degree category, 3 semester hours in Management Practices (11/74).

### 1. Basic Installation–Suburban (102)
### 2. Basic Installation–Urban (101)
### 3. Station Repair (103)

**Location:** 1. Garden City, Jamaica, and New York, NY.
2. 461 Eighth Avenue, New York, NY.
3. Garden City, Jamaica, and New York, NY.

**Length:** 1. 56-120 hours; individualized program.
2. 56-120 hours; individualized program.
3. 16-24 hours; individualized program.

**Dates:** January 1973–Present.

**Objective: Courses 1 and 3:** To provide the student with the skills required to install and repair basic suburban telephone station service. **Courses 2 and 3:** To provide the student with the skills required to install and repair basic urban telephone station service.

**Instruction: Courses 1 and 3:** Comprehensive coverage of work functions to perform all phases of primary telephone station installation, trouble analysis, and repair work. Programmed instruction (24 modules), including audiovisual material. **Courses 2 and 3:** Comprehensive coverage of work functions to perform all phases of primary telephone installation, trouble analysis, and repair work. Programmed instruction (28 modules), including audiovisual material.

**Credit recommendation: Courses 1 and 3:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electrical Construction and Maintenance (8/75). **Courses 2 and 3:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electrical Construction and Maintenance (8/75). NOTE: To receive credit, Course 3 must be completed with either Course 1 or Course 2.

### Basic Installation–Urban (101)

Refer to Basic Installation–Suburban (102).

### Business Office Supervisor (3003)

**Location:** 11 West 42nd Street, New York, NY.

**Length: Version 1:** 76 hours (3 weeks); 64 hours of supervised on-the-job experience.
**Version 2:** 83 hours (3 weeks); 71 hours of supervised on-the-job experience.

**Dates: Version 1:** June 1968–April 1978.
**Version 2:** April 1978–Present.

**Objective:** To teach business office supervisors methods and techniques of supervision and policies, objectives, and techniques relating to personnel.

**Instruction:** Fundamentals of supervision, human relations, and managerial practice. Motivation; performance appraisal; policies; planning; control; union-management relations; customer relations; work measurement; other management techniques. Classroom experience is supplemented by workshops, case studies, and other experience-based learning.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Management or Personnel (3/74).

### Career Development Workshop

**Location:** Mohonk Mountain House, New Paltz, NY.

**Length:** 40 hours (5 days); residential.

**Dates:** January 1974–July 1976.

**Objective:** To enable management women to explore career alternatives and to build the personal skills necessary to enhance career development by establishing self-development objectives.

**Instruction:** Acquaints participants with the general plan and purpose of the career development program; explores the organizational realities confronting women competing for middle and upper management positions; provides opportunities to increase self-awareness and skills as group members and leaders; helps conferees build personal development programs. Individual work combined with highly participative group learning experiences. About one-third of the course is lecture/discussion.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Social Science (Individual Development) (11/74).

### Commercial Instructor Training Course (3004)

**Location:** 11 West 42nd Street, New York, NY.

**Length:** 105 hours (3 weeks); individualized program.

**Dates:** January 1972–Present.

**Objective:** To enable new instructors to conduct effective and efficient training by providing them with skills in presenting material, a teaching style, and a developmental questioning technique for responding to student questions and evaluating students.

**Instruction:** Treatment of learner-centered instruction. Behavioral objectives; a behavior development technique; a teaching technique; teaching demonstrations and critiques; student verbal and nonverbal communications; a mode of handling student mistakes; conducting evaluation discussions; handling technical errors. Emphasis is on the technical, rather than the theoretical, aspects of the teaching process. Approximately 60 percent of the course is programmed instruction and in-class practice teaching.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Education (9/75). NOTE: While this credit recommendation applies only to the course as offered by the New York Telephone Company, the course is taught with substantially the same content and procedures in other Bell System Operating Companies throughout the United States.

### Crossbar Tandem (62)

**Location:** Garden City, Menands, New York, and Queens, NY.

**Length:** 480 hours (2 weeks).

**Dates:** January 1975—Present.

**Objective:** To provide the student with the ability to analyze, troubleshoot, and maintain electromechanical and associated circuitry.

**Instruction:** General description, features, basic components, and equipment aspects of electromechanical relay switching systems; trouble recognition and repair techniques; the use and maintenance of automated diagnostic recording equipment. A detailed study is made of block diagrams and schematics of typical switching systems. (Prerequisite: knowledge of basic electricity and circuit drawings.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 10 semester hours in Industrial (Electromechanical) Technology (6 lecture, 4 laboratory) (8/75).

### Engineering Economy Principles (4067)

**Location:** Corporate Learning Center Engineering School, Hotel Thayer, West Point, NY.

**Length:** 45 hours (4 days); residential.

**Dates:** July 1973—January 1977.

**Objective:** To provide management personnel with an understanding of engineering cost study concepts and techniques and why such studies are essential to the financial structure of the New York Telephone Company.

**Instruction:** Capital-revenue-expense relationship; time value of money; annual charge rates; engineering economy study; profitability study; own versus lease study; retiring versus existing plant; division or revenue. Lecture-oriented, with several hours of problem-solving sessions.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in General and Cost Accounting Applications in Engineering (3/74).

### Engineering Economy Techniques (4007)

Refer to Engineering Economy Techniques—CUCRIT Analysis (4007).

### Engineering Economy Techniques—CUCRIT Analysis (4007)

**(Formerly Engineering Economy Techniques [4007])**

**Location:** Corporate Learning Center Engineering School, Hotel Thayer, West Point, NY.

**Length:** 55 hours (5 days); residential.

**Dates:** January 1970—November 1979.

**Objective:** To equip management personnel actively engaged in the preparation or review of cost studies with the ability to apply the proper engineering cost study techniques to given study situations.

**Instruction:** Capital-revenue-expense relationships; time value of money; annual charge rates; engineering economy study; team workshop project; profitability study; own versus lease study; division of revenue. Class time is equally divided between lecture periods and problem-solving sessions.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in General and Cost Accounting Applications in Engineering (3/74).

### English as a Second Language

**Location:** Experimental Training Laboratory, 500 Eighth Avenue, New York NY.

**Length:** 180 hours (12 weeks).

**Dates:** October 1971—December 1976.

**Objective:** To increase the student's proficiency in all skills of English (speaking, understanding, reading, and writing).

**Instruction:** Major structures of English at the intermediate level. Auditory comprehension; speaking; reading; writing. The basic methodology used is audio-lingual, but modifications and improvements from more recent methodologies, such as the Silent Way, are included. Materials are standard texts (Praninskas' *Rapid Review of English Grammar*, Lorenz' *Patterns of American English*) and visual aids.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in English as a Second Language (11/74).

### First Level Workshop (5036)

**Location:** Dellwood Conference Center, New York, NY; Tappan Zee Town House, Nyack, NY.

**Length:** 40 hours (5 days); residential.

**Dates:** August 1974—Present.

**Objective:** To increase the first-level manager's self-awareness; to improve leadership skills.

**Instruction:** Roles of management. Planning; organization; leading and controlling; leadership functions; communications; problem analysis; decision making; subordinate development. Lectures, role playing, self-assessment instruments, facilitating, films and other audiovisual materials, and individual and sub-group activities are all incorporated in the course.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Management (11/74).

### Force Management
### Version 1: Force Management (9002)
### Version 2: Force Management (ACD 9046)
### Version 3: Force Management (TSPS 9044)

**Location:** Operator Services Management Training Center, 1790 Broadway, New York, NY.

**Length:** **Version 1:** 49 hours (7 days).
**Version 2:** 35 hours (5 days).
**Version 3:** 35 hours (5 days).

**Dates:** **Version 1:** January 1964—March 1975.
**Version 2:** March 1975—Present.
**Version 3:** March 1975—Present.

**Objective:** To teach office managers technical skills necessary to function in the area of force administration.

**Instruction:** All phases of force management cost control with emphasis on those functions that directly affect cost control and service rendered in the Operator Services Central Office; development of statistical techniques and managerial considerations in formulating policies regarding workload forecasting and personnel planning; peg count procedures; long- and short-range force programs; development of efficiency measurements.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Managerial Planning, Operations Management, or Work Force Measurement (3/74).

### Initial Management Training for Plant Foreman (8012)

**Location:** Corporate Learning Center, White Plains Hotel, White Plains, NY.

**Length:** 80 hours (2 weeks); residential.

**Dates:** January 1971—Present.

**Objective:** To teach foremen the basic concepts of the first-level supervisor's job.

**Instruction:** Fundamentals and applications of management practice. Planning; policy control; management by objectives; human behavior; salary administration and other personnel practices; cost control; union-management relations; appraisal. Lecture, discussion, case studies, role-playing exercises, and small group projects are used.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Management Process (3/74).

### Instructional Technology Workshop (5034)

**Location:** Experimental Training Laboratory, 500 Eighth Avenue, New York, NY.

**Length:** 39 hours (5-7 days); programmed instruction.

**Dates:** January 1973—October 1977.

**Objective:** To provide new course developers with the necessary technology and processes to research, develop, implement, and validate training curricula.

**Instruction:** Overview of instructional technology. Objectives and goal analysis; criterion testing; training requirements; task analysis; instructional media and method validation. Emphasis is on the technical, rather than the theoretical, aspects of the teaching process. Instructor-led programmed instruction with subgroup and individual exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Education (9/75). NOTE: While this credit recommendation applies only to the course as offered by the New York Telephone Company, the course is taught with substantially the same content and procedures in other Bell System Operating Companies throughout the United States.

### Key Telephone Systems—Repair (141)

**Location:** Garden City, Jamaica, and New York, NY.

**Length:** 45-120 hours; individualized program.

**Dates:** May 1974—Present.

**Objective:** To provide the student with the skills required to install and repair key telephone station systems.

**Instruction:** Key systems trouble analysis; circuit reading; testing procedures. Emphasis on component symbols, schematics, and circuit tracing. Students work on actual key equipment and analyze and isolate programmed troubles. Programmed instruction (10 modules).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electrical Construction and Maintenance (8/75).

### Language Skills

**Location:** Experimental Training Laboratory, 500 Eighth Avenue, New York, NY.

**Length:** 180 hours (9-12 weeks); individualized program.

**Dates:** January 1968—June 1976.

**Objective:** To provide remediation for students in elementary English language skills.

**Instruction:** Comprehension and vocabulary development. Identification and use of parts of speech and standard English grammatical usage; standard English syntactical variations; decoding, pronounciation, and use of over 5,000 frequently used words; acquisition of meaning from complex, day-to-day syntax; development of skills in performing under time pressures and test conditions; development of comprehension and analysis skills. Self-paced, programmed instruction is enhanced by lectures, skill practice sessions, and audiovisual aids.

**Credit recommendation:** In the vocational certificate category or in the lower division baccalaureate/associate degree category, 1 semester hour in Language Skills (English) (11/74).

## Mathematics

**Location:** Experimental Training Laboratory, 500 Eighth Avenue, New York, NY.

**Length:** 180 hours (9-12 weeks); individualized program.

**Dates:** January 1968—June 1976.

**Objective:** To enable the student to gain computational mastery of basic arithmetic skills.

**Instruction:** Basic arithmetic skills. Addition, subtraction, multiplication, and division of whole numbers, common fractions, and decimals; ratio; proportion percentages. Diagnostic testing directs the students to individualized learning materials appropriate for their background. Criteria testing measures and monitors the understanding and progress of the students. Programmed instruction is enhanced by lectures, individualized instruction, simulations, and skill practice sessions.

**Credit recommendation:** In the vocational certificate category or in the lower division baccalaureate/associate degree category, 1 semester hour in Basic Mathematics (11/74).

## Methods/Staff Assistant Administrative Training (1004)

**Location:** Overlook Lodge, Bear Mountain, NY; Holiday Inn, Orangeburg, NY.

**Length:** 35 hours (5 days); residential.

**Dates:** May 1972—Present.

**Objective:** To enable new managers to apply specific management skills to first-line managerial responsibilities.

**Instruction:** Organizing; aspects of communications; controlling; planning; operant management (positive reinforcement); motivation; individual/group decision making; managerial styles. Methodology includes the use of lectures, discussion, in-basket exercises, role playing, readings, and videotaping and critique.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 7 semester hours in Management or Administration (11/74).

## Number Five Crossbar—with AMA (Automatic Message Accounting) (49 and 126)

**Location:** Garden City, Menands, New York and Queens, NY.

**Length:** 520 hours (13 weeks).

**Dates:** December 1965—March 1979.

**Objective:** To provide the student with the ability to analyze, troubleshoot, and maintain electromechanical and associated circuitry.

**Instruction:** General description, features, basic components, and equipment aspects of electromechanical relay switching systems; trouble recognition and repair techniques; the use and maintenance of automated diagnostic recording equipment. A detailed study is made of block diagrams and schematics of typical switching systems. (Prerequisite: knowledge of basic electricity and circuit drawings.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 10 semester hours in Industrial (Electromechanical) Technology (6 lecture, 4 laboratory) (8/75).

## Number One Crossbar (109)

**Location:** Garden City, New York, and Queens, NY.

**Length:** 640 hours (16 weeks).

**Dates:** July 1968—Present.

**Objective:** To provide the student with the knowledge needed to analyze, troubleshoot, and maintain electromechanical and associate circuitry.

**Instruction:** General description, features, basic components, and equipment aspects of electromechanical relay switching systems; trouble recognition and repair techniques. A detailed study is made of block diagrams and schematics of typical switching systems. (Prerequisite: knowledge of basic electricity and circuit drawings.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 10 semester hours in Industrial (Electromechanical) Technology (6 lecture, 4 laboratory) (8/75).

## Number One E.S.S. (Electronic Switching Systems) (507, 508, 509, 534 & 539)

**Location:** Garden City, Menands, New York, Queens, and White Plains, NY.

**Length:** 1,014 hours (6 months).

**Dates:** January 1967—Present.

**Objective:** To provide the student with a comprehensive understanding of the fundamentals of digital electronics and computer technology.

**Instruction:** Introduction to electronic devices; binary and octal number systems; Boolean algebra; truth tables and Karnaugh maps; combinational and sequential logic circuits (gates and flip flops); ferrite core and read-only memory systems; clocks; computer architecture (bus systems, accumulators and registers, buffers, stocks and queues, memory addressing, and parity); programming in Machine and Assembly languages; flowcharting; core mapping; I/O and diagnostic routines; peripheral devices (the tape transport, the teletype, and the magnetic card writer). Significant laboratory experience is included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Basic Electronics and 6 semester hours in

Digital Electronics and in the upper division baccalaureate category, 16 semester hours in Computer Technology (8/75).

### Outside Plant Engineering – Basic (4032)

**Location:** Corporate Learning Center Engineering School, Hotel Thayer, West Point, NY.

**Length:** 96 hours (3 weeks); residential.

**Dates:** January 1973 – August 1979.

**Objective:** To provide the student with an overview and basic working knowledge of the practical design techniques of telephone distribution systems.

**Instruction:** Route layout sheets; subsciber loop design; electrical protection principles; pole-line design; conduit and manhole design; service requirements; distribution cable design. The course is composed of modules which build on knowledge and skills learned in previous modules. Class time is equally divided between lecture and practical exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Building Services (4/75).

### Outside Plant Engineering – Building Industry Consultant (4035)

**Location:** Corporate Learning Center Engineering School, Hotel Thayer, West Point, NY.

**Length:** 64 hours (2 weeks); residential.

**Dates:** January 1970 – Present.

**Objective:** To provide the student with an understanding of building industry services.

**Instruction:** New building activity; blueprint reading; design of buidling's telephone requirements; raceways, floor closets, and main terminal rooms; multi-residential wiring. the course is composed of modules which build on knowledge and skills learned in previous modules. Approximately three-quarters of the course is devoted to practical application of the material presented.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Blueprint Reading and Estimating (4/75).

### 1. Outside Plant Engineering – Exchange Feeder Route Analysis Program (4065, 4084)
### 2. Outside Plant Engineering – Feeder Route Analysis (4034)

**Location:** Corporate Learning Center Engineering School, Hotel Thayer, West Point, NY.

**Length:** 1. 32 hours (1 week); residential.
2. 32 hours (1 week); residential.

**Dates:** 1. January 1973 – Present.
2. January 1973 – July 1978.

**Objective:** To provide the student with the computer applications of feeder route planning and design.

**Instruction:** Preparation and analysis of specialized coding forms; remote data entry; analysis and decisions based on program output; route layout applications for feeder route design and relief. The course is composed of modules which build on knowledge and skills learned in previous modules. Approximately half of the class time is devoted to practical application of the material presented.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Computer Applications in Engineering Technology or Industrial Technology or Introductory Data Processing (4/75). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Outside Plant Engineering – Facilities (4068)

**Location:** Corporate Learning Center Engineering School, Hotel Thayer, West Point, NY.

**Length:** 80 hours (2 weeks); residential.

**Dates:** January 1973 – July 1979.

**Objective:** To provide the student with the tools and methods to properly design and administer new and existing feeder and distribution facilities.

**Instruction:** Case study approach to the design of telephone distribution system for a suburban community using both new and existing facilities.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Elementary Engineering Case Studies or Industrial Design (4/75).

### Outside Plant Engineering – Feeder Routes Analysis (4034)

Refer to Outside Plant Engineering – Exchange Feeder Route Analysis Program (4065).

### Panel Apparatus

Refer to Panel Switching Systems.

### Panel Selector Circuits

Refer to Panel Switching Systems.

### Panel Senders and Decoders

Refer to Panel Switching Systems.

### Panel Switching Systems
### 1. Panel Selector Circuits
### 2. Panel Senders and Decoders
### 3. Panel Apparatus

**Location:** New York and Queens, NY.

**Length:** 480 hours (12 weeks).

**Dates:** March 1965 – January 1976.

**Objective:** To provide the student with the knowledge needed to analyze, troubleshoot, and maintain electromechanical and associated circuitry.

**Instruction:** General description, features, basic components, and equipment aspects of electromechanical relay and stepping switching systems; trouble recognition and repair techniques. A detailed study is made of block diagrams and schematics of typical switching systems. (Prerequisite: knowledge of basic electricity and circuit drawings.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Industrial (Electromechanical) Technology (4 lecture, 4 laboratory) (8/75). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

## Pre-Management Training Course (9004)

**(Formerly Thirteen Week Pre-Management Training Course [9004])**

**Location:** Traffic Management Training Center, 1790 Broadway, New York, NY.

**Length:** 350 hours (10 weeks); residential.

**Dates:** January 1964—Present.

**Objective:** To prepare potential managers to assume responsibilities of administering an Operator Services office.

**Instruction:** An integrated program which was broken into three parts for purposes of evaluation. **Part 1:** General management functions (including development of plans); personnel management functions (hiring and interviewing, motivation training, performance appraisal, payroll implementation, industrial relations, and indoctrination of new employees). **Part 2:** Review of all phases of force management cost control, development of statistical techniques and managerial considerations in formulation of policies regarding workload forecasting and personnel planning; peg count procedures; long- and short-range force programs; development of efficiency measurements. **Part 3:** Development of analytical skills in measuring service performance; knowledge of traffic department objectives; errors and irregularities; index plan, management observations, and speed of answer index; uniformity index; proper handling of customer contacts. Role playing used in situations requiring judgment on staff performance.

**Credit recommendation: Part 1:** In the upper division baccalaureate category, 6 semester hours in General Management (3/74). **Part 2:** In the upper division baccalaureate category, 3 semester hours in Managerial Planning, Operations Management, or Work Force Management (3/74). **Part 3:** In the upper division baccalaureate category, 3 semester hours in Operations Management (3/74).

## Programmed Training Course for Service Assistants (9012, 2001)

**Location:** Local telephone offices throughout New York State.

**Length:** 35 hours (7-10 days); individualized program.

**Dates:** April 1969—October 1975.

**Objective:** To enable the trainee to plan for, implement, evaluate, and conduct initial and remedial training on a one-to-one or two-to-one basis.

**Instruction:** Teaching methods; reinforcement theory; communication skills; planning and scheduling training; selection of corrective training; evaluation of students and providing feedback. Workbooks, programmed texts, role playing, and audiotapes are used. Instruction is provided in self-paced modular units.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Foundations of Supervision or Training Techniques; or in the upper division baccalaureate category, 2 semester hours in Foundations of Supervision or Training Techniques (11/74).

## Second Level Staff Administrative Training (1005)

**Location:** Overlook Lodge, Bear Mountain, NY; Holiday Inn, Orangeburg, NY.

**Length:** 32 hours (4½ days), residential.

**Dates:** January 1973—Present.

**Objective:** To enable a manager to demonstrate on the job a measurable increase in acceptance of the basic accountability for meeting company needs, commitment to the achievement of the corporate goals, and skill in the management function which should create a stimulating climate for the subordinate staff.

**Instruction:** Management theories of Kostick, McGregor, and Maslow; motivation; time management; communications and language usage; operant management (positive reinforcement); appraisal interviews; analysis of Union Carbide and Western Company cases. Role playing, films, and classroom exercises are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Management (11/74).

## Second Level Workshop (5030)

**Location:** Dellwood Conference Centers, New York, NY; Tappan Zee Town House, Nyack, NY.

**Length:** 40 hours (1 week); residential.

**Dates:** October 1972—Present.

**Objective:** To assist middle-level managers in developing key managerial skills required to perform their jobs effectively.

**Instruction:** Advanced behavioral science theory workshop; combines theory inputs with gaming, simulations, role-playing exercises, case studies, and experience-based learning. The following areas are covered from a behavioral viewpoint: leadership; management styles; learning; motivation; communications; personnel development; team development. Considerable student participation, interaction, and self-assessment.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Applied Behavioral Sciences (3/74).

## Service Analysis

**Version 1: Service Analysis (9091)**
**Version 2: Service Analysis (TSPS 9001)**
**Version 3: Service Analysis (Directory Assistance 9040)**

**Location:** Operator Services Management Training Center, 1790 Broadway, New York, NY.

**Length:** 35 hours (5 days).

**Dates:** **Version 1:** January 1964—March 1975.
**Version 2:** March 1975—Present.
**Version 3:** March 1975—Present.

**Objective:** To teach managers of Operator Services offices the technical, analytical, and managerial skills necessary to analyze service results and plan required training programs for subordinates.

**Instruction:** Development of analytical skills in measuring service performance; training in development of staff capability in service performance measurement; knowledge of Operator Services department objectives; errors and irregularities; index plan, management observations, and Operator Services Answer Consistency Plan; proper handling of customer contacts; evaluation of tone of service. Role playing is used in situations requiring judgment of staff performance.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Operations Management (3/74).

## Station Repair (103)

Refer to Basic Installation—Suburban (102).

## Supervisory Decisions, Actions and Growth (5002)

**Location:** 111 Livingston Street, Brooklyn, NY; 140 West Street, New York, NY; 20 Park Street, Albany, NY.

**Length:** 45 hours (1 week); residential.

**Dates:** June 1973—August 1975.

**Objective:** To assist lower level managers in developing key managerial skills required to perform their jobs effectively.

**Instruction:** Introductory behavioral science theory workshop. Decision making; leadership; motivations; group dynamics; self-awareness. Combines theory inputs with gaming, simulations, role-playing exercises, case studies, and experienced-based learning.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Applied Behavioral Sciences (3/74).

## Supervisory Responsibilities Workshop (8025)

**Location:** Corporate Learning Center, White Plains Hotel, White Plains, NY.

**Length:** 80 hours (2 weeks); residential.

**Dates:** September 1973—Present.

**Objective:** To increase the professional competence of first-level supervisors in human relations and the management process.

**Instruction:** Application of the management process, including planning, organizing, and controlling; communication skills; personnel and labor relations; transactional analysis. Lecture, discussion, case studies, role-play exercises, and small group projects are used.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Management Process (7/75).

## Thirteen Week Pre-Management Training Course (9004)

Refer to Pre-Management Training Course (9004).

## Trainer Workshop (5031)

**Location:** Overlook Lodge, Bear Mountain Inn, Bear Mountain, NY; Sheraton Eagle Bay Inn, Ossining, NY.

**Length:** 40 hours (1 week); residential.

**Dates:** October 1972—Present.

**Objective:** To improve the skill of corporate instructors, course designers, and training administrators, in the art and science of helping adults learn.

**Instruction:** Establishing an appropriate climate for learning; facilitating the learning process; using a variety of methods of presentation; use of voice, language, and physical action; working with others in group settings; specifying personal plans for self-development.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Educational Methodology (3/74).

## COMPUTER TECHNOLOGY TRAINING PROGRAM

The Computer Technology Training Program was designed to offer professional "state of the art" training to all management personnel whose job responsibilities lie in the area of electronic data processing. In order to meet this objective, the Program is divided into five functional areas: Basic Programmer Training; Programming Services; System Development; "User" Training; and Operations Training.

### Advanced FORTRAN Coding and Workshop (6068)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 35 hours (1 week).

**Dates:** November 1976—Present.

**Objective:** To provide the student with the skills and knowledge necessary to utilize FORTRAN.

**Instruction:** Review of elementary FORTRAN concepts; extension of student's knowledge to include multi-dimensional arrays, functions, subroutines, and files. (Prerequisites: Computer Fundamentals for Managers 6064, FORTRAN IV Coding and Workshop 6034, and Introduction to Time-Sharing 6065, or the equivalent of these three courses.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Computer Technology or Data Processing (3/78).

### Basic ANS COBOL Coding and Workshop (6074)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 210 hours (6 weeks).

**Dates:** June 1971—Present.

**Objective:** To provide the student with the skills and knowledge needed to write ANS COBOL programs.

**Instruction:** Flow charting, coding, debugging, implementing, and documenting programs written in ANS COBOL. (Prerequisite: Introduction to Programming and IBM S/370 6072 or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division associate category, 6 semester hours in Computer Technology or Data Processing (3/78).

### Basic Assembler Language Coding (ALC) (6025)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 119 hours (17 days).

**Dates:** July 1973—Present.

**Objective:** To provide the student with the skills and knowledge necessary to use IBM Assembler Language.

**Instruction:** Documenting and coding Assembler Language programs and subprograms using standard and decimal instructions; using the program listing and storage dump as debugging aids; writing programs and subprograms that are to be combined with other program modules, using standard conventions for linkage and passing data; using appropriate reference materials and manuals as required.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 6 semester hours in Computer Technology or Data Processing (3/78).

### Basic OS—JCL and Utilities for Operations Support (6030)

Refer to Operating Systems Applications.

### Basic OS Utilities Workshop (6023)

Refer to IBM OS—JCL and Utilities.

### Basic PL/I Coding and Workshop (6067)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 84 hours (12 days).

**Dates:** October 1974—Present.

**Objective:** To provide the student with the skills and knowledge nececessary to use PL/I.

**Instruction:** Data attributes; STREAM and RECORD I/O; control statements; procedures; structures; arrays; allocation of storage; preprocessing; use and coding of internal and external subroutine and functions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Computer Technology or Data Processing (3/78).

### COBOL Core Debugging (6029)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY; 1166 Avenue of the Americas, New York, NY.

**Length:** **Version 1:** 28 hours (4 days).
**Version 2:** 35 hours (5 days).

**Dates:** **Version 1:** August 1973—August 1978.
**Version 2:** September 1978—Present.

**Objective:** To provide the student with the skills and experiences necessary to debug programs at the machine level.

**Instruction:** Understanding and resolution of the ABENDS most commonly encountered by the COBOL programmer.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Computer Technology or Data Processing (3/78).

### Computer Fundamentals for Managers (6064)

Refer to Introduction to Programming.

### 1. Concepts of Total System Development (6070)

### 2. Project Management (6071)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 1. 21 hours (3 days).
2. 35 hours (1 week).

**Dates:** 1. December 1976—Present.
2. June 1976—August 1979.

**Objective:** To provide the student with the fundamental concepts of systems analysis and design, and project management.

**Instruction: Course 1:** Using standard terminology to describe the Total System Development process; identifying and knowing when to apply the various specialized technical skills that may be required to support a systems development effort. **Course 2:** Application of a systems approach to project planning control; including PERT/CPM and general network theory and techniques. (Prerequisite: Concepts of Total System Development 6070 or the equivalent.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, or the in upper division baccalaureate category, or in the graduate degree category, 3 semester hours in Computer Technology or Data Processing (3/78). NOTE: Courses 1 and 2 must both be completed to receive credit.

### FORTRAN IV Coding and Workshop (6034)

Refer to Introduction to Programming.

### IBM Information Management System (IMS/VS) Batch Programming (6048)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 35 hours (1 week).

**Dates:** June 1977—Present.

**Objective:** To provide the student with the skills and knowledge necessary to effectively utilize IMS in a batch environment.

**Instruction:** IMS data base concepts; DL/1 Boolean logic and commands; secondary index structures. (Prerequisites: IMS/VS Overview 6047 or the equivalent, and either Basic ANS COBOL Coding and Workshop 6074, or Basic Assembler Language Coding (ALC) 6025, or Basic PL/I Coding and Workshop 6067, or the equivalent of one of these three courses.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Computer Technology or Data Processing (3/78).

### IBM Information Management System (IMS/VS) Teleprocessing Programming (6050)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 35 hours (1 week).

**Dates:** June 1977—Present.

**Objective:** To provide the student with the skills and knowledge necessary to effectively utilize IMS in a teleprocessing environment.

**Instruction:** IMS message flow to/from a terminal; message processing vs. batch message processing; PCB's; Batch Terminal Simulation. (Prerequisite: IBM Information Management System (IMS/VS) Batch Programming 6048.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category or in the graduate degree category, 1 semester hour in Computer Technology or Data Processing (3/78).

### IBM OS–JCL and Utilities

### 1. Introduction to OS Job Control Language (JCL) (6020)

### 2. Basic OS Utilities Workshop (6023)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 1. 35 hours (1 week).
2. 35 hours (1 week).

**Dates:** 1. August 1973—Present.
2. June 1975—Present.

**Objective:** To provide the student with the skills necessary to run programs and use utilities.

**Instruction: Course 1:** Basic components of an Operating System; coding, testing, and debugging Job Control Language. (Prerequisite: Introduction to Programming and IBM S/370 6072 or the equivalent.) **Course 2:** Utilizing the Job Control Language and Program Control Language required to execute commonly used services provided by the OS Systems and Data Set Utility Programs; creating, using, and deleting generation data groups and data sets. (Prerequisites: Basic ANS COBOL Coding and Workshop 6074, Introduction to OS Job Control Language 6020, and Introduction to Programming and IBM S/370 6072, or the equivalent of these three courses.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Computer Technology or Data Processing (3/78). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Interactive Programming

1. **TSO for COBOL Programmers (6056)**
2. **TSO for PL/I Programmers (6075)**
3. **TSO/SPF for COBOL Programmers (6076)**

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 1. 35 hours (1 week).
2. 21 hours (3 days).
3. 35 hours (1 week).

**Dates:** 1. November 1974—December 1979.
2. January 1977—December 1977.
3. March 1977—Present.

**Objective:** To provide the student with the skills and experiences necessary to write and run programs in an interactive environment.

**Instruction:** Entering and manipulating data from the terminal; developing, compiling, and executing interactive programs; writing and executing TSO procedures.

**Credit recommendation: Course 1, 2, or 3:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Computer Technology or Data Processing (3/78). NOTE: These courses cover substantially the same material. Credit should *not* be awarded to a student for more than one of the courses.

### Introduction to Data Processing for Operation Support (6077)

Refer to Operating Systems Applications.

### Introduction to OS Job Control Language (JCL) (6020)

Refer to IBM OS—JCL and Utilities.

### Introduction to Programming

1. **Computer Fundamentals for Managers (6064)**
2. **Introduction to Time-Sharing (6065)**
3. **FORTRAN IV Coding and Workshop (6034)**
4. **Using Time-Sharing and Introduction to the BASIC Language (6066)**

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 1. 21 hours (3 days).
2. 28 hours (4 days).
3. 35 hours (1 week).
4. 35 hours (1 week).

**Dates:** 1. August 1976—Present.
2. May 1975—Present.
3. March 1975—Present.
4. October 1975—Present.

**Objective:** To introduce the student to the fundamentals of computer programming with a high-level language.

**Instruction: Course 1:** Introduction to hardware and software; processing of data; elementary programming logic. **Course 2:** Time-sharing concepts and programming applications in BASIC. (Prerequisite: Computer Fundamentals for Managers 6064 or the equivalent.) **Course 3:** Continuing concepts of programming, including loops and single dimensional arrays using FORTRAN IV. (Prerequisites: Computer Fundamentals for Managers 6064 and Introduction to Time-Sharing 6065, or the equivalent of these two courses.) **Course 4:** Continuing concepts of programming, including loops and single dimensional arrays using BASIC. (Prerequisites: Computer Fundamentals for Managers 6064 and Introduction to Time-Sharing 6065, or the equivalent of these two courses.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Computer Technology or Data Processing (3/78). NOTE: Courses 1 and 2 and either 3 or 4 must be completed to receive credit. Credit is *not* recommended for a student who has already received credit for Introduction to Programming and IBM S/370 6072.

### Introduction to Programming and IBM S/370 (6072)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 70 hours (2 weeks).

**Dates:** January 1977—Present.

**Objective:** To provide the student with a sophisticated introduction to programming logic and a basic understanding of the IBM S/370.

**Instruction:** Number system; hexadecimal and binary arithmetic; internal and external data representation; OS/VS concepts overview; external storage concepts; introduction to S/370 machine language; programming logic.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Computer Technology or Data Processing (3/78).

NOTE: Credit is *not* recommended for a student who has already received credit for the Introduction to Programming sequence of courses 6064, 6065, and either 6034 or 6066.

### Introduction to Time-Sharing (6065)

Refer to Introduction to Programming.

### Operating Systems Applications
### 1. Introduction to Data Processing for Operations Support (6077)
### 2. Basic OS--JCL and Utilities for Operations Support (6030)
### 3. OS Utilities for Operations Support (6031)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 1. 70 hours (2 weeks).
2. 35 hours (1 week).
3. 35 hours (1 week).

**Dates:** 1. July 1977—Present.
2. June 1973—Present.
3. June 1973—Present.

**Objective:** To provide the student with the skills and knowledge necessary to utilize IBM OS/VS effectively.

**Instruction: Course 1:** Overview of hardware and operational processing; objectives and purposes of operating systems; JCL fundamentals and use. **Course 2:** JCL with extensive application; accessing, interpreting and utilizing systems control and data control information. Case problems and machine exercises are used extensively. (Prerequisite: Introduction to Data Processing for Operations Support 6077 or the equivalent.) **Course 3:** Construction of procedures; systems maintenance; data set manipulation. Case problems and machine exercises are used extensively. (Prerequisites: Basic OS-JCL and Utilities for Operations Support 6030 and Introduction to Data Processing for Operations Support 6077, or the equivalent of these two courses.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Computer Technology or Data Processing (3 lecture, 1 laboratory) (3/78). NOTE: Courses 1, 2, and 3 or Course 3 and the equivalents of Courses 1 and 2 must be completed to receive credit.

### OS Utilities for Operations Support (6031)

Refer to Operating Systems Applications.

### Programmer Productivity Techniques (6069)

**Location:** Corporate Learning Center, 210 West 18th Street, New York, NY.

**Length:** 35 hours (1 week).

**Dates:** August 1976—Present.

**Objective:** To provide the student with the techniques necessary to design structured programs.

**Instruction:** Decomposing problems and designing programs using HIPO; representing a program's logic in pseudo-English.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Computer Technology or Data Processing (3/78).

### Project Management (6071)

Refer to Concepts of Total System Development (6070).

### TSO for COBOL Programmers (6056)

Refer to Interactive Programming.

### TSO for PL/I Programmers (6075)

Refer to Interactive Programming.

### TSO/SPF for COBOL Programmers (6076)

Refer to Interactive Programming.

### Using Time-Sharing and Introduction to the BASIC Language (6066)

Refer to Introduction to Programming.

## MARKETING MANAGEMENT TRAINING PROGRAM

The Marketing Management Training Program was designed to provide a comprehensive and relevant study of the marketing field, including both quantitative and conceptual elements. Two pedagogical approaches are taken in presenting the material. The quantitative courses—Statistical Foundations, Sampling and Forecasting, Multivariate Analysis, Computer Applications in Marketing—are instructed in half-day sessions over 10-week periods. This technique allows adequate time for individual study and homework assignments. The balance of the training—Marketing Concepts and Analysis, Market Research and Segmentation, Consumer Behavior and Marketing Strategy—is conducted in one-week sessions on a "live-in" basis. The advantages of this approach include informal discussion with faculty members and a convenient working environment for group projects and case preparation.

### Computer Applications in Marketing (M0906)
### (Business Statistics)

**Location:** Various company locations.
**Length: Version 1:** 35 hours (10 weeks).
**Version 2:** 35 hours (5 weeks).
**Dates: Version 1:** March 1976—February 1978.
**Version 2:** March 1978—Present.

**Objective:** To teach the student how to use computers in statistical analyses relating to business decision making.

**Instruction:** Computer concepts; BASIC language and programs; statistical techniques (sampling, regression, multivariate anlysis, time series, and probabilistic models). Emphasis is on packaged computer programming material.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Business or Statistics (8/76).

### Consumer Behavior and Marketing Strategy (M0902)

**Location:** East Norwich Inn, East Norwich, NY.
**Length:** 35 hours (1 week).
**Dates:** February 1976—October 1980.

**Objective:** To provide an understanding of the psychological dimensions of consumer behavior, current macroeconomic analysis, and strategic marketing planning.

**Instruction:** General psychological models of behavior; perception; learning theory; personality, motivation, and behavior. An overview of the macroeconomic theory, with emphasis on inflation and recession. Strategic planning concepts, with emphasis on the components of the marketing mix.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Marketing (8/76).

### Forecasting and Sampling (M0904)
**(Formerly Sampling and Forecasting [M0904])**

**Location:** Various company locations.
**Length: Version 1:** 35 hours (10 weeks).
**Version 2:** 35 hours (5 weeks).
**Dates: Version 1:** July 1975—February 1978.
**Version 2:** March 1978—Present.

**Objective:** To provide the student with a managerial outlook on the utilization, techniques, and applications of sampling and forecasting.

**Instruction:** Data collection; nonprobability and probability samples; stratified sampling; quota samples; cluster; systematic and area sampling; applications of results; econometrics; business cycles; leading and lagging indicators; industry forecasts; sales force opinion; time series analysis; regression and correlation in forecasting.

**Credit recommendation:** In the upper division baccalaureate category, or in the graduate degree category, 3 semester hours in Applied Statistics (8/76).

### Market Research and Segmentation (M0901)
### (Introduction to Market Research)

**Location:** East Norwich Inn, East Norwich, NY.
**Length:** 40 hours (1 week).
**Dates:** September 1975—August 1980.

**Objective:** To provide an introduction to the various facets of marketing research processes, and a study of marketing segmentation approaches.

**Instruction:** Goal setting and project planning; field force supervision; data collection and data analysis; criterion variables; analytical tools; methods and philosophy of segmentation. The course includes the use of projects and case studies.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Marketing (8/76).

### Marketing Concepts and Analysis (M0900)
### (Marketing Management)

**Location:** East Norwich Inn, East Norwich, NY.
**Length:** 35 hours (1 week).
**Dates:** May 1975—June 1980.

**Objective:** To provide an overview of the conceptual foundation of marketing and appropriate decision-making, analytical techniques.

**Instruction:** Marketing introduction; buyer behavior; market research; product planning; pricing; promotion; advertising; and decision analysis. Overview of applied analytical methods; multiple regression;

and perceptual mapping and modeling. The course includes the use of case studies.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Marketing (8/76).

## Multivariate Analysis (M0905) (Marketing Applications of Multivariate Analysis)

**Location:** Various company locations.

**Length:** **Version 1:** 35 hours (10 weeks).
**Version 2:** 35 hours (5 weeks).

**Dates:** **Version 1:** January 1976—February 1978.
**Version 2:** March 1978—Present.

**Objective:** To enable the student to apply and evaluate multivariate analytic techniques for marketing decisions.

**Instruction:** An examination of the various multivariate analysis techniques and their application to marketing. Correlation and regression; multiple regression; automatic interaction detector (AID); multiple discriminant analysis; cluster analysis; multidimensional scaling and conjoint measurement.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Marketing (8/76).

## Sampling and Forecasting (M0904)

Refer to Forecasting and Sampling (M0904).

## Statistical Foundations (M0903)

**Location:** Various company locations.

**Length:** **Version 1:** 35 hours (10 weeks).
**Version 2:** 35 hours (5 weeks).

**Dates:** **Version 1:** May 1975—February 1978.
**Version 2:** March 1978—Present.

**Objective:** To provide the student with the techniques needed to carry out the statistical analysis of data in business decision areas.

**Instruction:** Data sources; sample size determination; the normal curve; descriptive statistics interpretation; statistical inference; small samples; analysis of variance; chi-squares; tests of independence of principles of classification; regression and correlation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Statistics (8/76).

# NEWARK DEVELOPMENTAL CENTER

Founded in 1878, Newark Developmental Center is one of 24 New York State developmental centers whose primary function is the care and enrichment of the State's mentally retarded clients. Operating under the auspices of the New York State Office of Mental Retardation and Developmental Disabilities, the facility serves 1,500 clients in Ontario, Seneca, Wayne, and Yates counties.

The Education and Training Service is an administrative support unit which provides training and continuing education to all professional and paraprofessional staff with the goal of developing and maintaining expertise at every level.

Source of office student records: Director of Education and Training Service, Newark Developmental Center, 703 East Maple Avenue, Newark, New York 14513.

## Administration of Medications

**Location:** Newark Developmental Center, 703 East Maple Avenue, Newark, NY.

**Length:** 48 hours (8 weeks).

**Dates:** January 1978—June 1981.

**Objective:** To provide paraprofessionals with the knowledge and skills necessary to administer medications safely, including knowledge of therapeutic and side effects of commonly used drugs.

**Instruction:** Competency-based instruction in legal issues, pharmacotherapeutics, administration and recording of medications, apothecary and metric systems of measurement, abbreviations, use of standard reference books.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Nursing Sciences (10/79).

## Human Anatomy and Physiology

**Location:** Newark Developmental Center, 703 East Maple Avenue, Newark, NY.

**Length:** 24 hours (4 weeks).

**Dates:** November 1978—June 1981.

**Objective:** To provide participants with a fundamental knowledge of anatomy and physiology.

**Instruction:** Human body systems: circulatory, digestive, endocrine, integumentary, musculoskeletal, nervous, reproductive, respiratory, sensory, and urinary.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Biological Sciences (10/79).

## Normal Growth and Development

**Location:** Newark Developmental Center, 703 East Maple Avenue, Newark, NY.

**Length:** 30 hours (5 weeks).

**Dates:** August 1978—June 1981.

**Objective:** To provide participants with a knowledge of the stages of normal growth and development from birth to death.

**Instruction:** Psychosocial and physical characteristics of humans from birth to death; theories of personality development.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Education, Human Development, Psychology or Sociology (10/79).

# NORTHPORT VETERANS ADMINISTRATION MEDICAL CENTER

Northport Veterans Administration Medical Center is a teaching hospital that provides a wide range of patient services to United States military veterans. The 940-bed medical center serves as the clinical campus for State University of New York at Stony Brook's medical, nursing, and allied health science schools.

## SCHOOL OF RADIOLOGIC TECHNOLOGY

The School of Radiologic Technology was established at the Northport Veterans Administration Medical Center in 1973 for the purpose of supplying the Veterans Administration and the community with well-qualified radiographers. The full-time 24-month program of didactic and clinical instruction is designed to provide training in both theoretical and practical aspects of radiography. Students attend classes, participate in laboratory experiments, write technical papers, develop scientific exhibits, and perform radiography under the supervision of a staff technologist in the Department of Radiology. Clinical affiliations are maintained with St. Charles Hospital in Port Jefferson and Huntington Hospital in Huntington. Graduates of the School demonstrate a high level of technical expertise while possessing the moral and ethical qualities consistent with the professional standards set by the American Registry of Radiologic Technologists and the New York State Department of Health, Bureau of Radiologic Technology.

Source of official student records: Registrar, School of Radiologic Technology, Building 2, Northport Veterans Administration Medical Center, Middleville Road, Northport, New York 11768.

### Clinical Practicum (Clinical Education)

**Location:** Huntington Hospital, Park Avenue, Huntington, NY; Northport Veterans Administration Medical Center, Middleville Road, Northport, NY; St. Charles Hospital, Belle Terre Road, Port Jefferson, NY.

**Length:** Minimum of 2,200 hours (2 years).

**Dates:** June 1973–Present.

**Objective:** To allow the student to obtain experience in the practice of radiologic technology in a controlled clinical setting.

**Instruction:** Students function as learning members of the hospital's radiology department. Experience is provided in patient preparation, selection of proper techniques for radiographic analysis, and administration of ionizing radiation for the purpose of diagnostic examination with appropriate radiation protection control. Close supervision is provided to develop and evaluate the students' clinical skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 12 semester hours in Alllied Health Sciences or Radiography (10/80).

### Darkroom Chemistry and Procedures

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 16 hours (16 weeks).

**Dates:** June 1973–Present.

**Objective:** To enable the student to develop the knowledge and skills necessary to perform appropriate darkroom procedures, to identify the chemical constituents of processing solutions and their functions, to understand duplication of film and subtraction techniques, and to evaluate radiographic film characteristics.

**Instruction:** Darkroom procedures and chemical constituents and functions of processing solutions. Processing room design and function; photographic process; manual processing (the developer, rinsing, fixer, washing, and drying); preparation of solutions; automatic processing; radiographic film artifacts and their causes.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences or Radiography (10/80).

### Fundamentals of Radiography

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 48 hours (24 weeks).

**Dates:** June 1973–Present.

**Objective:** To provide the student with an overview of the history of radiography and to introduce the student to the clinical aspect of training through knowledge of medical terminology and ethics.

**Instruction:** History of radiology: discovery and major advancements; radiologic technology as a health profession specialty; organization of the hospital and the department of radiology. Medical terminology: recognition of the written and spoken language of medicine; modifications of meaning; radiographic terms; medical abbreviations and symbols. Professional ethics: definition, scope, and nature; confidentialty; the technologist's obligations; medicolegal problems and solutions; New York State licensure.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences of Radiography (10/80).

### Medical-Surgical Diseases

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1981—Present.

**Objective:** To provide the student with an understanding of the effect on radiographic technique of changes that occur in disease and injury.

**Instruction:** Principles used in the identification of circulatory, degenerative, and neoplastic diseases; conditions of illness involving the systems of the body, with stress on radiographic technology.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences (10/80).

### Patient Care (Nursing Procedures)

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 15 hours (15 weeks).

**Dates:** June 1973—Present.

**Objective:** To provide the student with an understanding of the proper methods of assisting and moving the patient, basic first aid procedure, aseptic techniques, and management of the seriously ill or injured patient.

**Instruction:** Body mechanics; aseptic techniques; management of seriously ill or injured patient (acute abdomen, fractures, and dislocations); patient reaction to iodinated contrast media; the emergency tray/cart; basic first aid; nursing procedures pertinent to radiology (anesthesia, operating room radiography, bedside radiography, and handling patients with communicable diseases).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences (10/80).

### Pediatric Radiography

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 8 hours (8 weeks).

**Dates:** January 1981—Present.

**Objective:** To acquaint the student with the techniques and procedures used in radiographing the pediatric patient.

**Instruction:** Equipment, accessories, and psychological aids. Types of examinations: special chest; neck and cervical spine; skull; upper and lower extremities; G.I. tract; urinary tract; special procedures; special contrast studies. Childhood diseases and the abused child.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences or Radiography (10/80).

### Principles of Radiographic Exposure

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 45 hours (45 weeks).

**Dates:** June 1973—Present.

**Objective:** To provide the student with an understanding of the principles involved in the formation of the latent radiographic image and their appplication to different situations.

**Instruction:** Definitions; characteristics of X-rays; formation of the latent image; intensifying and fluoroscopic screens; prime factors of radiographic exposure; factors controlling and affecting radiographic quality; beam restricting devices (collimators, cones, cylinders, and diaphragms); filters; grids; stereoscopy; conditions influencing choice of chart; kilovoltage and milliamperage; review of grid conversion factors; review of screen conversion factors; kilovoltage distance conversion factors; use of higher kilovoltages; quality control and immobilization techniques. Supervised laboratory experience is included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Radiography (10/80).

### Radiation Protection and Radiobiology

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, N.Y.

**Length:** 45 hours (22 weeks).

**Dates:** June 1973—Present.

**Objective:** To provide the student with a knowledge of radiation biology and the effects of ionizing radiation on biological systems; to enable the student to understand ionizing radiation and the need for protective measures and maximum safety in radiography.

**Instruction:** Elementary pathology; short-term effects of ionizing radiation; long-term somatic effects of ionizing radiation; biological effects of ionizing radiation; radiation effects of mitosis. Radiation units of measurement; interactions of radiation with matter; maximum permissible dose; principles of safety; introduction to radiation detection instruments; protective barriers, ionizing radiation, and public health.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Allied Health Sciences (10/80).

## Radiographic Anatomy and Physiology

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 84 hours (42 weeks).

**Dates:** June 1973—Present.

**Objective:** To provide the student with knowledge of the structure and function of the human body with emphasis on radiographic aspects.

**Instruction:** The body as an integrated whole; skeletal and articular systems; axial and appedicular skeleton; muscular system; integration and control of the body; circulatory and lymphatic systems; respiratory, digestive, and urinary systems; reproduction; endocrine system and fluids and electrolytes. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Allied Health Sciences or Biology (10/80).

## Radiographic Film Critique

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 80 hours (40 weeks).

**Dates:** June 1973—Present.

**Objective:** To enable the student to evaluate and improve the diagnostic quality of a radiograph.

**Instruction:** Patient profile, pathology, and condition during radiographic examination; technical factors and focus-film distance; collimation and shielding; positioning; anatomy; radiographic quality.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Radiography (10/80).

## Radiographic Positioning

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 175 hours (58 weeks).

**Dates:** June 1973—Present.

**Objective:** To enable the student to identify and follow the correct procedures in positioning patients for radiography.

**Instruction:** General positioning: radiography of upper and lower extremities; chest; shoulder; clavicle; scapula; pelvis and hip; ribs; bony thorax; vertebral column; gastrointestinal tract; urinary tract; skull. Skull radiography: terminology; routine skull series; sella turcica; optic foramina; orbital structures; mastoid processes of temporal bones; temporal styloid processes; pars petrosae of temporal bones; paranasal sinuses; facial and nasal bones. Contrast media: basic forms; precautionary steps in preparation and administration; patient preparation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Allied Health Sciences or Radiography (10/80).

## Radiological Physics

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 110 hours (55 weeks).

**Dates:** June 1973—Present.

**Objective:** To provide the student with a knowledge of the general theories of physics as they apply to radiographic practice; to provide the student with an understanding of the general care, maintenance, and testing of radiographic equipment.

**Instruction:** Fundamentals of mathematics: fractions; ratio and proportions; square roots; power of ten; elementary algebra and plane geometry as they apply to radiography. Radiologic physics: fundamental units; derived units; mechanics; matter; electrostatics; magnetism; electrodynamics; electromagnetism; transformers; X-ray tubes; roentgen rays; interaction of radiation and matter. Care and maintenance of X-ray equipment and accessories. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Allied Health Sciences or Radiological Physics (10/80).

## Special Areas of Radiological Physics

**Location:** Northport Veterans Administrtion Medical Center, Middleville Road, Northport, NY.

**Length:** 54 hours (27 weeks).

**Dates:** January 1978—Present.

**Objective:** To introduce the student to basic physical principles for special advanced topics in radiological science.

**Instruction:** Physics of ultrasound, computed tomography, nuclear medicine, and radiation therapy. Each student is required to submit and present a research paper.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Allied Health Sciences or Radiological Physics (10/80).

### Special Procedures

**Location:** Northport Veterans Administration Medical Center, Middleville Road, Northport, NY.

**Length:** 25 hours (15 weeks).

**Dates:** June 1973—Present.

**Objective:** To provide the student with a knowledge of the supplementary procedures used in advanced technology and related radiographic equipment.

**Instruction:** Design, function, and maintenance of radiographic equipment used for special procedures: high output generators; special tables; rapid serial changes; pressure injectors; Polaroid units; photo-timing units; photofluorographic equipment. Supplementary procedures: myelograms; pneumoencephalograms and ventriculograms; arthrography; lymphangiograms; hysterosaphinography; cardioangiography; cerebral angiography; aortography; mammography.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences or Radiography (10/80).

# PEAT, MARWICK, MITCHELL & CO.

Peat, Marwick, Mitchell & Co. is a worldwide firm of independent auditors and accountants. The firm has over 90 offices in the United States, and offers auditing, tax, and management consulting services to a wide range of clients located in all sections of the business, not-for-profit, and governmental communities.

The firm conducts diverse technical training required for the professional development of its personnel in audit, tax, and management consulting divisions of its practice, as well as for the development of technical competence in dealing with problems unique to specialized industries. The courses offered include topics on accounting and auditing, taxation, managerial skills development, reporting to regulatory bodies, and highly technical instruction on computers and systems installation. All professionals, from newly employed staff to experienced partners, participate in these courses at levels of complexity commensurate with their responsibilities, experience, and needs. The training itself is conducted at the Professional Development Center in New York or in cities convenient to a large number of operating offices.

Source of official student records: Director of Educational Services, Peat, Marwick, Mitchell & Co., 810 Seventh Avenue, New York, New York 10019.

### Advanced Tax Strategies (Tax Problems in Corporation Formation, Liquidation, and Reorganization)

**Location:** Various locations throughout the United States.

**Length:** 40 hours (1 week).

**Dates:** August 1980—Present.

**Objective:** To introduce participants to basic rules and concepts of Subchapter C of the Internal Revenue Code dealing with corporate formation, liquidation, and reorganization.

**Instruction:** Major topics covered include: stock redemptions; corporate formation, liquidation, and reorganization; collapsible corporations; multiple corporations. (Prerequisite: Planning Tax Entities or the equivalent.)

**Credit recommendation:** In the graduate degree category, 3 semester hours in Taxation (5/81).

### Basic Tax Concepts (Survey of Basic Federal Tax Concepts)

**Location:** Various locations throughout the United States.

**Length:** 40 hours (1 week).

**Dates:** January 1978—Present.

**Objective:** To acquaint participants with the basic elements of individual and corporate income taxation.

**Instruction:** Major topics covered in survey form include: types of Federal taxes; accounting periods and methods; elements of gross income; deductions for individuals and corporations; property transactions; basic tax procedures; computation of tax liability.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Accounting or Taxation (5/81).

### Operating Tax Principles (Tax Problems of Partnerships, Trusts and Estates, and Corporations)

**Location:** Various locations throughout the United States.

**Length:** 40 hours (1 week).

**Dates:** July 1980—Present.

**Objective:** To provide participants with a comprehensive understanding of the tax problems of partnerships, trusts and estates, and corporations.

**Instruction:** Major topics covered include: partnership taxation; income taxation of trusts and estates; corporate distributions not in liquidation; Internal Revenue Code Subchapter S corporations; deferred compensation plans. (Prerequisite: Basic Tax Concepts or the equivalent.)

**Credit recommendation:** In the graduate degree category, 3 semester hours in Taxation (5/81).

### Planning Tax Entities (Advanced Tax Problems of Partnerships, Trusts and Estates, and Corporations)

**Location:** Various locations throughout the United States.

**Length:** 40 hours (1 week).

**Dates:** June 1980—Present.

**Objective:** To broaden participants' understanding of the formation and operation of partnerships, Internal Revenue Code Subchapter S corporations, regular corporations, and consolidated groups of corporations.

**Instruction:** Case studies involving: consolidated returns; partnership taxation; accounting for income taxes; transfers to controlled corporations; Internal Revenue Code Subchapter S corporations; trusts and estates; accounting periods and methods. (Prerequisite: Operating Tax Principles or the equivalent.)

**Credit recommendation:** In the graduate degree category, 3 semester hours in Taxation (5/81).

# PEPSI-COLA COMPANY
# PEPSI-COLA MANAGEMENT INSTITUTE

Pepsi-Cola Company, a division of PepsiCo Inc., based in Purchase, New York, is primarily engaged in the development, manufacturing, and marketing of soft drink products through a nationwide network of franchise and company-owned bottling facilities, Pepsi-Cola Company and its company-owned bottling plants employ approximately 6,500 people.

Pepsi-Cola Management Institute's primary function is to provide ongoing management seminars and educational television training programs for Pepsi-Cola bottlers in the United States and internationally. The management seminars are conducted in most major cities with participants from all geographic areas in attendance.

Source of official student records: Registrar, Pepsi-Cola Management Institute, Anderson Hill Road, Purchase, New York 10577.

---

## Basic Financial Concepts (Basic Accounting)

**Location:** Various locations throughout the United States.

**Length:** 28 hours (4 days); residential.

**Dates:** August 1977—June 1981.

**Objective:** To provide an understanding of financial reports and data as they are used in management decisions.

**Instruction:** Concepts and methods underlying financial statements; interpretation of a balance sheet and income statement; interpretation of a statement of changes in a financial statement; financial statement analysis; budgeting process; nature of fixed and variable costs; break-even concepts and analysis.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Accounting (8/77).

## Coordinating the Marketing and Production Functions of the Franchise

**Location:** Various locations throughout the United States.

**Length:** 21 hours (3 days); residential.

**Dates:** August 1977—June 1981.

**Objective:** To improve understanding and communication between marketing/sales and production/warehousing personnel.

**Instruction:** Simulation case study involving the relationship between marketing and production.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in General Management or Marketing (8/77).

## Distribution Management

**Location:** Various locations throughout the United States.

**Length:** 21 hours (3 days); residential.

**Dates:** August 1977—June 1981.

**Objective:** To provide an understanding of the overall importance of distribution and the economic benefits of effective distribution management.

**Instruction:** Overview of distribution; distribution costs; profit leverage; load forecasting; personnel considerations; sales and merchandising execution; human needs and motivation; compensation systems; vehicle routing; distribution equipment; computer applications.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Marketing (8/77).

## Dynamics of Warehouse Operations

**Location:** Various locations throughout the United States.

**Length:** 21 hours (3 days); residential.

**Dates:** August 1977—June 1981.

**Objective:** To provide an understanding of the basic concepts of materials handling.

**Instruction:** Objectives of materials handling; understanding distribution centers; flow of materials; analysis of marketing data; materials handling equipment; inventory control; utilization and layouts of distribution centers.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Industrial Engineering or Operations Management (8/77).

## Financial Decisionmaking

**Location:** Various locations throughout the United States.

**Length:** 28 hours (4 days); residential.

**Dates:** August 1977—June 1981.

**Objective:** To provide an understanding of cost accounting as a tool of financial decisionmaking.

**Instruction:** Full absorption costing; break-even analysis; determining marginal contribution; direct costing in decisionmaking; conversion to direct costing: relevant costs in decisionmaking: capital investment planning: comprehensive financial planning.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Cost Accounting (8/77).

### Franchise Opportunities Through Market Research (Observational Techniques in Market Research)

**Location:** Various locations throughout the United States.

**Length:** 14 hours (2 days): residential.

**Dates:** August 1977—June 1981.

**Objective:** To provide an understanding of observational techniques in market research.

**Instruction:** Selecting the observational unit: collecting data: tabulating results: report preparation and presentation.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Marketing (8/77).

### Introduction to Management

**Location:** Various locations throughout the United States.

**Length:** 30 hours (4 days): residential.

**Dates:** August 1977—June 1981.

**Objective:** To develop an understanding of the underlying principles and concepts related to the management process and managerial behavior.

**Instruction:** Practical basics of management, including problem solving, motivating for results, communications skills, team building, and leadership skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Management (8/77).

### Management by Objectives

**Location:** Various locations throughout the United States.

**Length:** 21 hours (3 days): residential.

**Dates:** August 1977—June 1981.

**Objective:** To provide an understanding of the managerial process called management by objectives.

**Instruction:** MBO as a management philosophy; management as a system: the goal-setting process in MBO; relating objectives to key areas of responsibilty: developing action plans.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Management (8/77).

### Marketing Soft Drinks to the Supermarket Industry (Marketing to Retailers)

**Location:** Various locations throughout the United States.

**Length:** 35 hours (5 days): residential.

**Dates:** August 1977—June 1981.

**Objective:** To provide an understanding of the merchandising strategies involved in marketing to retailers.

**Instruction:** Structure and functions of retail management: developing and presenting marketing campaigns to retailers: emerging issues in retailing.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Marketing (8/77).

### The People Program: Individual Development

**Location:** Various locations throughout the United States.

**Length:** 35 hours (1 week): residential.

**Dates:** August 1977—June 1981.

**Objective:** To develop the personal insights, attitudes, and skills to enable the manager to resolve problems that occur in the work setting.

**Instruction:** Using the workshop approach, students explore all aspects of people relationships in the work settings, as well as the workshop setting itself. Emphasis is on the practical "people problems" of the job, dealing with communication styles, problem diagnosis and resolving face-to-face conflicts. The individual's influence and power in his or her organizations is explored as part of his or her management impact.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Behavioral Aspects of Management (8/77).

### Plant Operations Management

**Location:** Various locations throughout the United States.

**Length:** 35 hours (5 days): residential.

**Dates:** November 1977—June 1981.

**Objective:** To provide an understanding of the concepts of sound plant operations management.

**Instruction:** Overview of the fundamentals of the corporate structure. Principles of efficient management, with emphasis on plants, materials, and people; the use of such management tools as work analysis, personnel motivation, work measurement, flow charts, control charts, and Gantt charts; establishing work standards.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Operations Management (11/77).

## Project Management

**Location:** Various locations throughout the United States.

**Length:** 21 hours (3 days); residential.

**Dates:** August 1977—June 1981.

**Objective:** To provide an overview of the history, philosophy, basic terminology, and selected techniques of project management.

**Instruction:** PERT; CPM; network analysis (deterministic and nondeterministic); PERT/Costs; analysis by simulation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Industrial Engineering, Management Science, or Operations Management (8/77).

## 1. Promotion Profitability
## 2. Sales Forecasting
## (Sales Promotion and Forecasting)

**Location:** Various locations throughout the United States.

**Length:** 1. 14 hours (2 days); residential.
2. 14 hours (2 days); residential.

**Dates:** August 1977—June 1981.

**Objective:** To provide an overview of sales promotion and forecasting in marketing to final consumers.

**Instruction:** Understanding and planning sales promotions; types of promotional tools; economics of promotions; promotional support activities; the role of sales forecasting; short-term and long-term forecasting; methods of forecasting; problems in forecasting; improving forecasting.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Marketing (8/77). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Sales Forecasting

Refer to Promotion Profitability.

# PILGRIM PSYCHIATRIC CENTER

Pilgrim Psychiatric Center, a facility of the New York State Office of Mental Health, was established in 1932 to provide care for emotionally and mentally ill persons. It is the largest of three adult psychiatric hospitals in Suffolk County, with an inpatient population of 3,700 and an outpatient census of 1,200. The Center also provides mental health services to residents of Nassau County.

The main focus of the Department of Education and Training is to provide programs which will maximize the staff's effectiveness with clients and colleagues. Courses are open to professional and paraprofessional staff of the hospital as well as to community participants, college students, and volunteers.

Source of official student records: Director of Education and Training, Pilgrim Psychiatric Center, West Brentwood, New York 11717.

## Medication Administration Certification for Mental Hygiene Therapy Aides (Administration of Medications)

**Location:** Pilgrim Center, West Brentwood, NY.

**Length:** 30 hours (2 weeks).

**Dates:** August 1978—Present.

**Objective:** To provide paraprofessionals with the knowledge and skills necessary to administer medications safely, including knowledge of therapeutic and side effects of commonly used drugs.

**Instruction:** Orientation to pharmocology including legal aspects; medical terminology; administration and recording of medications; overview of pharmaceutical actions, side effects, and dosages; use of standard reference books; systems of weights and measures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Nursing Sciences (10/79).

# PLAY SCHOOLS ASSOCIATION, INC.

The Play Schools Association is a national, nonprofit agency which was established in 1917 to foster the utilization of play/activities as an educational, therapeutic, and recreational tool to benefit children. The central focus of the Association's program is to prevent social breakdown and delinquency by providing necessary guidance during the years in which the patterns of adulthood are shaped in the interaction of work and play alike.

The Association provides a wide range of public and private agencies with consultation and training services. These include: the conduct of projects using action-research in curriculum development; testing and evaluating education equipment, materials, and methods of teaching both normal and handicapped children; the production of films and publications; and training programs for professionals, paraprofessionals, parents, and volunteers. The program listed below is conducted in cooperation with Blythedale Children's Hospital.

Source of official student records: Executive Director, The Play Schools Association, Inc., 19 West 44th Street, New York, New York 10036.

## In-Service Training Institute in Therapeutic Recreation

**Location:** Blythedale Children's Hospital, Valhalla, NY.

**Length:** 60 hours (10 weeks).

**Dates:** May 1977—Present.

**Objective:** To provide the knowledge, skills, and attitudes required for the development of therapeutic recreation programs in both institutional and community settings.

**Instruction:** An indepth study of therapeutic recreation for persons working in various institutional settings (clinical practitioners through supervisory personnel). Training content consists of special skills workshops in games, crafts, puppetry, music, dramatics, gross motor activities and sports, animation, videotaping, woodworking, and scrap crafts. Interdisciplinary workshops and lectures include representatives from the fields of special education, nursing psychiatry, occupational therapy, physical therapy, and speech therapy. In addition, clinical practice is scheduled involving direct work with children in the therapeutic recreation program.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Therapeutic Recreation (5/77).

# PORT AUTHORITY OF NEW YORK AND NEW JERSEY

The Port Authority of New York and New Jersey is an independent public agency responsible for developing and operating transportation and other facilities of commerce within the New York-New Jersey metropolitan area. The facilities include international airports, interstate tunnels and bridges, marine terminals, interstate bus terminals, motor union trucking terminals, and a rapid transit system between New York and New Jersey.

Opportunities for training and development are available in a variety of areas including executive management, clerical, operations, maintenance, and such specialized areas as police work and tolls collection. Formal courses and programs are developed by the Personnel Department's Career Development Division and are conducted by various departments within the company as well as by professionals from academic institutions and industry. In offering these programs, the Port Authority utilizes the module concept. Training modules are made up of two to five courses covering various phases of the same general subject or geared to different levels of experience. Background courses in a module may be taken in sequence or not, as the applicant chooses. Courses from different modules may also be taken.

Source of official student records: Manager, Career Development Division, The Port Authority of New York and New Jersey, One World Trade Center, Suite 62 South, New York, New York 10048.

### Advanced Records Management

**Location:** One World Trade Center, New York, NY.

**Length:** 36 hours (4 weeks).

**Dates:** September 1971—June 1981.

**Objective:** To provide the student with the expertise to handle and process more complex records management transactions; to improve supervisory effectiveness.

**Instruction:** Classification and indexing; records retention and storage; work organization; audits; fundamentals of supervision. (Prerequisite: Fundamentals of Records Management.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Administration, Records Management, or Secretarial Science; or in the upper division baccalaureate category, 2 semester hours in Business Education (9/75).

### Case Problems in Organizational Behavior and Administration

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (10 weeks).

**Dates:** January 1968—June 1981.

**Objective:** To broaden the participant's understanding of the managerial process both within and outside the corporate environment.

**Instruction:** Organizational structure; individual behavioral patterns; superior/subordinate relationships; group dynamics; the processess of communication, control, innovation, and change; the works of Weber, Maslow, Hertzberg, and McGregor. The course is divided between discussion of assigned readings, group analysis of case problems, and lecture presentation of theory and related research findings.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Organizational Behavior (4/75).

### 1. Case Problems in Systems Analysis
### 2. Management Orientation to Computers

**Location:** One World Trade Center, New York, NY.

**Length:** 1. 12 hours.
2. 20 hours.

**Dates:** January 1971—June 1981.

**Objective:** To provide the student with an introduction to the basics of computers and computer systems and their application; to provide an introduction to the concepts of simulation and quantitative methods in system analysis.

**Instruction:** Basic concepts of electronic data processing. Data representation and recording; computer equipment; how the computer is instructed to perform its task; how this tool can assist in problem solving and providing information; fundamental procedures used in computer systems analysis. Programming exercises in BASIC. Case studies, lecture, discussion, and laboratory/workshops are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business or Management Science (2/75). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Fundamentals of Records Management

**Location:** One World Trade Center, New York, NY.

**Length:** 33 hours (3½ weeks).

**Dates:** September 1971—June 1981.

**Objective:** to introduce the student to records systems.

**Instruction:** Filing procedures and systems; subject classifications; records retention; transfer and destruction of records; handling requests; follow-up procedures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Administration, Records Management, or Secretarial Science; or in the upper division baccalaureate category, 2 semester hours in Business Education (9/75).

## High Tension Training Program

**Location:** LaGuardia Airport Training Center, New York, NY.

**Length:** 60 hours (12 weeks).

**Dates:** June 1966—June 1981.

**Objective:** To train electricians and electrical foremen as high tension system operators in order to assume on site responsibility for the operation, maintenance, and fault diagnosis of high tension power distribution systems.

**Instruction:** Safety; safety and test equipment; control equipment; distribution systems; power systems and grounding theory; transformers; cables; system protection; low tension distribution systems; low tension equipment; typical equipment; fault diagnosis and recordkeeping.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electrical Construction Maintenance or Electrical Power Distribution (9/75).

## Leadership Communications Workshop

**Location:** Hotel Thayer, West Point, NY.

**Length:** 45 hours (5 days); residential.

**Dates:** Janauary 1965—June 1981.

**Objective:** To develop the communications knowledge, attitudes, and skills necessary to achieve effective performance within an organizational structure.

**Instruction:** Methods of effective communication with supervisors, subordinates, and peers; understanding and resolving communications barriers; the importance of listening and utilizing feedback. The course includes a series of lectures, training exercises, readings, and laboratory activities which permit the student to evaluate new ideas and approaches to communications and receive feedback concerning the effectiveness of his/her communications skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Applied Behavioral Sciences (4/75).

## The Managerial Grid

**Location:** Harrison House, Glen Cove, NY.

**Length:** 60 hours (5½ days); residential.

**Dates:** January 1968—June 1981.

**Objective:** To make the student a more effective manager by understanding and analyzing the effect of various managerial styles, receiving feedback on his/her managerial style, and experimenting with different managerial styles.

**Instruction:** Managerial grid concepts; analysis of dominant and back-up managerial styles; use of critique in building team effectiveness; organizational culture concepts; causes and resolutions of organizational conflict; study of personal grid styles. Through the use of case problems, role playing, team critiques, and team problem solving, participants are able to analyze their effectiveness as individuals and as part of a problem-solving team.

**Credit recommendation:** In the graudate degree category, 2 semester hours in Behavioral Aspects of Management (4/75).

## 1. Managerial Psychology
## 2. Motivation—Key to Productivity

**Location:** One World Trade Center, New York, NY.

**Length:** 1. 20 hours (10 weeks).
2. 18 hours (9 weeks).

**Dates:** 1. January 1973—June 1981.
2. January 1968—June 1981.

**Objective: Course 1:** To review the applications of basic principles of psychology to management situations. **Course 2:** To review current concepts of motivation and behavior as applied to the individual and the group in a work environment.

**Instruction: Course 1:** Industrial psychology; counseling and interviewing; motivation; learning and training; group dynamics; evaluation and appraisal. Course material is presented through lecture, discussion, role playing, films, and problem-solving exercises. **Course 2:** Principles of motivation; the self-motivated achiever; Hertzberg's motivation-through-job-enrichment theory; McGregor's "Theory X—Theory Y"; human nature and organizational realities; management of human assets. The course consists of a series of films and seminar discussions.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Managerial Psychology (5/75). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Management Orientation to Computers

Refer to Case Problems in Systems Analysis.

## 1. Managerial Workshop
## 2. Tools, Skills, and Principles of Management

**Location:** One World Trade Center, New York, NY.

**Length:** 45 hours (8 weeks).

**Dates:** January 1974—June 1981.

**Objective:** To identify and explore current management concepts and principles; to enable participants to become effective team members and leaders.

**Instruction:** The management function; the manager's job; planning; organizing; controlling; delegating responsibility and authority; the manger's responsibility for developing subordinates; standards and appraisal; communications and perceptions; motivation; patters of leadership; the decision-making process. Using case problems, simulations, role playing, and skills exercises, participants apply the management tools of setting standards, communicating, motivating, directing, and decision making.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in General Management (4/75).

### Motivation–Key to Productivity

Refer to Managerial Psychology.

### Personnel Supervision

**Location:** One World Trade Center, New York, NY.

**Length:** 37½ hours (15 weeks).

**Dates:** January 1965–June 1981.

**Objective:** To increase managerial efficiency by providing an understanding of the principles of supervision.

**Instruction:** Selection and placement; training and personal development; employee attitudes; job performance; labor relations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Supervision (5/75).

### Problem Analysis and Decision Making

**Location:** Harrison House, Glen Cove, NY; Hotel Thayer, West Point, NY; Molly Pitcher Hotel, Red Bank, NJ; Nassau Inn, Princeton, NJ.

**Length:** 45 hours (5 days); residential.

**Dates:** January 1965–June 1981.

**Objective:** To provide the student with the skills needed to identify, gather, and analyze relevant information in management situations requiring problem analysis, decision making, and control.

**Instruction:** A systematic, logical approach to identifying and processing information in three areas: analyzing a problem to determine its cause (problem analysis); making a sound decision after considering desired results, available resources, and potential adverse consequences (decision making); and successful implementation of a plan to effectively deal with the problem (control). Students work as teams to handle an understanding of the concepts of logical thinking in the analysis of current management problems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in General Management (4/75).

### Psychology–Understanding Human Behavior I

**Location:** One World Trade Center, New York, NY.

**Length:** 37½ hours (15 weeks).

**Dates:** January 1965–June 1981.

**Objective:** To provide an introduction to psychological principles.

**Instruction:** Heredity and environment; motivation; emotions; individual differences; learning theory and perception; social behavior.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Psychology (5/75).

### Sergeants' Pre-Promotional Supervisory Training Course

**Location:** One Path Plaza, Journal Square Transportation Center, Jersey City, NJ.

**Length:** 37 hours (2 weeks).

**Dates:** January 1967–June 1981.

**Objective:** To provide the student with basic supervisory principles and techniques.

**Instruction:** First-line supervisory training. Administrative procedures; supervision; leadership; effective communication; the management functions (planning, organizing, directing, controlling) as carried out by the supervisor. Worshops, lectures, and seminars are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Principles of Supervision (12/74).

### Stenographic Skills (100WPM)

**Location:** One World Trade Center, New York, NY.

**Length:** 20 hours (5 weeks).

**Dates:** January 1971–June 1981.

**Objective:** To increase the student's stenographic speed from 80 to 100 words per minute.

**Instruction:** Students are pre- and post-tested to determine individual proficiency. Dictation is given throughout the course for instructor information and student feedback. No theory instruction is included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Secretarial Science (9/75).

### Stenographic Skills (120 WPM)

**Location:** One World Trade Center, New York, NY.

**Length:** 20 hours (5 weeks).

**Dates:** January 1971–June 1981.

**Objective:** To increase the student's stenographic speed from 100 to 120 words per minute.

**Instruction:** Students are pre- and post-tested to determine individual proficiency. Dictation is given throughout the course for instructor information and student feedback. No theory instruction is included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Secretarial Science (9/75).

### The Supervisor's Job

**Location:** Hotel Thayer, West Point, NY.

**Length:** 45 hours (5 days); residential.

**Dates:** January 1965—June 1981.

**Objective:** To provide the participant with an understanding of the manager's role in an organization; to provide him/her with a background of basic principles of efficient business management.

**Instruction:** The supervisor's job; organizational theory; roles and role conflict; behavior and attitudes; motivation and morale; patterns of leadership; delegation of responsibility and authority; interpersonal and intergroup relationships; conflict resolutions; consensual decisions; effective group action. Course objectives are realized through a series of selected readings, lectures, discussions, and job-related simulation and role-playing exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Behavioral Aspects of Management (4/75).

### Tools, Skills, and Principles of Management

Refer to Managerial Workshop.

### Typing Skills Training

**Location:** One World Trade Center, New York, NY.

**Length:** 20 hours (5 weeks).

**Dates:** January 1971—June 1981.

**Objective:** To upgrade the student's typing speed from 40 to 50 words per minute.

**Instruction:** Students are pre- and post-tested to determine individual proficiency. Timed writings are used throughout the course for instructor information and student feedback. No keyboard instruction is given.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Secretarial Science (9/75).

## AUTOMOTIVE APPRENTICE TRAINING PROGRAM

The courses listed below constitute the Automative Apprentice Training Program, which is designed to prepare entrance-level personnel and high school recruits for employment within the Port Authority as autmotive mechanics. Entrance-level personnel include laborers, maintenance men, helpers, and clerical staff. Selection for the program is on the basis of performance in a competitive examination; applicants must also have high school diplomas. Once selected, trainees are required to participate in a four-year program, which includes approximately a two-year after-hours class and shop-related instruction program and a four-year on-the-job program, which run concurrently. If a trainee does not maintain a satisfactory rating in his work performance and instructional training at any time during this four-year period, he is dropped from the program.

### Automotive Class and Shop Work

**Location:** Various Port Authority training facilities.

**Length:** 5,854 hours (4 years); combined lecture and shop.

**Dates:** January 1965—June 1981.

**Objective:** To provide automotive apprentices with the knowledge and skills necessary to qualify as journeymen mechanics.

**Instruction:** Gasoline and diesel power plants; fuel systems; transmissions; electrical systems; basic machine shop and welding procedures; hydraulic and pneumatic systems; brakes; diagnosis and testing; routine vehicle maintenance and service.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 30 semester hours in Automotive Mechanics (9/75).

### Basic Mathematics

**Location:** Various Port Authority training facilities.

**Length:** 72 hours (12 weeks).

**Dates:** January 1965—June 1981.

**Objective:** To provide a foundation in trade-related mathematics necessary for an automotive apprentice training program.

**Instruction:** Whole numbers; fractions; decimals; percentage; power and roots; ratio and proportion; solution of equations in one variable; mensuration; triangles. (Text used: *Basic Mathematics Simplified*, by C. Thomas Olivo.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Elementary Mathematics (9/75).

## Basic Physics

**Location:** Various Port Authority training facilities.
**Length:** 72 hours (12 weeks).
**Dates:** January 1965—June 1981.

**Objective:** To provide a foundation in trade-related science for electrical and automotive apprentice training programs.

**Instruction:** Properties of matter; mechanics and machines; magnetism and electrical energy; heat energy and heat machines; light energy; sound energy; electronics; nuclear energy. (Text used: *Fundamentals of Applied Physics*, by C. Thomas Olivo and Alan Wayne.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Elementary Physics (9/75).

## Blueprint and Automotive Drawing Interpretation

**Location:** Various Port Authority training facilities.
**Length:** 72 hours (12 weeks).
**Dates:** January 1965—June 1981.

**Objective:** To train automotive apprentices in blueprint reading, sketching, and automotive drawing interpretation.

**Instruction:** Basic blueprint reading, trade sketching, and intrepretation of automotive assembly; drawings of such things as the engine assembly, cooling systems, the fuel system, and electrical systems. (Text used: *Automotive Drawing Interpretation*, by Louis E. Jensen.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Automotive Drawing and Blueprint Reading (9/75).

# ELECTRICAL APPRENTICE TRAINING PROGRAM

The courses listed below constitute the Electrical Apprentice Training Program, which is designed to prepare entrance-level personnel and high school recruits for employment within the Port Authority as journeymen electricians. Entrance-level personnel include laborers, maintenance men, helpers, and clerical staff. Selection for the program is on the basis of performance in a competitive examination; applicants must also have high school diplomas. Once selected, trainees are required to participate in a four-year program, which includes 600 hours of after-hours class and shop-related instruction and an on-the-job program, which run concurrently. If a trainee does not maintain a satisfactory rating in his work performance and instructional training at any time during this four-year period, he is dropped from the program.

## 1. Advanced Electrical Theory
## 2. Alternating Current
## 3. Applied D. C. and A. C. Theory
## 4. Electrical Theory and Circuits
## 5. Industrial Electronic Controls

**Location:** Various Port Authority training facilities.
**Length:** Classroom Instruction—363 hours. Field Work—7,680 hours.
**Dates:** January 1965—June 1981.

**Objective:** To provide apprentices with the knowledge and skills needed to qualify them as journeymen electricians.

**Instruction:** D.C. circuits; A.C. circuits; polyphase circuits; motors, generators, and transformers; motor and generator controls; rectifiers; basic amplifier concepts.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 30 semester hours in Electrical Construction Maintenance (14 lecture, 16 shop) (9/75). NOTE: Courses 1, 2, 3, 4, and 5, must all be completed to receive credit.

## Alternating Current

Refer to Advanced Electrical Theory.

## Applied D. C. and A. C. Theory

Refer to Advanced Electrical Theory.

## Basic Mathematics

**Location:** Various Port Authority training facilities.
**Length:** 93 hours (15 weeks).
**Dates:** January 1965—June 1981.

**Objective:** To provide a foundation in trade-related mathematics necessary for electrical and watch engineer apprentice training programs.

**Instruction:** Whole numbers; fractions; decimals; percentage; power and roots; ratio and proportion; solution of equations in one variable; mensuration; triangles; slide rule. (Text used: *Basic Mathematics Simplified*, by C. Thomas Olivo.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Elementary Mathematics (9/75).

### Basic Physics

**Location:** Various Port Authority training facilities.

**Length:** 72 hours (12 weeks).

**Dates:** January 1965—June 1981.

**Objective:** To provide a foundation in trade-related science for electrical and automotive apprentice training programs.

**Instruction:** Properties of matter; mechanics and machines; magnetism and electrical energy; heat energy and heat machines; light energy; sound energy; electronics; nuclear energy. (Text used: *Fundamentals of Applied Physics*, by C. Thomas Olivo and Alan Wayne.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Elementary Physics (9/75).

### Blueprint Reading and Sketching

**Location:** Various Port Authority training facilities.

**Length:** 72 hours (12 weeks).

**Dates:** January 1965—June 1981.

**Objective:** To train electrical apprentices in blueprint reading, sketching, and estimating, and in the application of the National Electric Code.

**Instruction:** Fundamentals of mechanical drafting; the National Electric Code symbols and nomenclature; reading, analyzing, and drawing of residential, commercial, and industrial wiring diagrams; electrical construction estimating.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electrical Blueprint Reading and Estimating (9/75).

### Electrical Theory and Circuits

Refer to Advanced Electrical Theory.

### Industrial Electronic Controls

Refer to Advanced Electrical Theory.

## POLICE RECRUIT TRAINING PROGRAM

The courses listed below make up the academic part of the Police Recruit Training Program conducted by the Port Authority Police Academy. This is an intensive twelve-week program in which all newly appointed Port Authority police officers participate. All courses are conducted at the Police Academy which is located at One Path Plaza, Journal Square Transportation Center, Jersey City, New Jersey 07306.

Source of official student records: Manager, Career Development Division, The Port Authority of New York and New Jersey, One World Trade Center, Suite 62 South, New York, New York 10048.

### Accident Prevention, First Aid, and Safety Education

**Location:** One Path Plaza, Journal Square Transportation Center, Jersey City, NJ.

**Length:** 30 hours.

**Dates:** January 1967—June 1981.

**Objective:** To provide the student with the theory and practice of first aid procedures.

**Instruction:** Theory and practice of first aid procedures in such situations as shock, wounds, strokes, and heart attacks; transportation of hazardous commodities; extrications from dangerous situations; radiation detection; principles of safety.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Physical Education (12/74).

### Criminal Law and Procedure

**Location:** One Path Plaza, Journal Square Transportation Center, Jersey City, NJ.

**Length:** 50 hours.

**Dates:** January 1967—June 1981.

**Objective:** To provide the student with an understanding of Criminal Procedure Law and Penal Law in New York and New Jersey and their application to daily police activities.

**Instruction:** Introduction to criminal law with special emphasis on the New York and New Jersey statutes. Use of affidavits; court appearances; the grand jury system. Lectures, workshops, and seminars are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Criminal Law (12/74).

### Introduction to Law Enforcement

**Location:** One Path Plaza, Journal Square Transportation Center, Jersey City, NJ.

**Length:** 39 hours (10-20 additional hours of structured independent study).

**Dates:** January 1967—June 1981.

**Objective:** To acquaint students with the structure and organizational framework within which they will function in their role as public servants.

**Instruction:** Introduction to the criminal justice system and the role of police in that system, with special emphasis on the courts at Federal, state and local levels. Students complete a research project in some aspect of the judicial system and participate in lectures, laboratories, and class discussions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Law Enforcement (12/74).

### Police and Community Problems

**Location:** One Path Plaza, Journal Square Transportation Center, Jersey City, NJ.

**Length:** 39 hours.

**Dates:** January 1967—June 1981.

**Objective:** To introduce the student to some of the dynamics of the police/community relationship.

**Instruction:** An examination of police and community relations from the police perspective. Development and adherence to a code of ethics; police work as a profession; prejudice as a deterrent to effective police/public contacts; officer/violator communications. Instruction includes lectures, class discussion, and workshops.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Police and Community Problems (12/74).

### Social Psychology

**Location:** One Path Plaza, Journal Square Transportation Center, Jersey City, NJ.

**Length:** 37 hours.

**Dates:** January 1967—June 1981.

**Objective:** To introduce the student to the principles of human behavior in relation to police service.

**Instruction:** Personality; crisis intervention; conflict management; interpersonal communications; small group dynamics; adolescent behavior. Lectures, discussions, and laboratories are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Social Psychology (12/74).

### Traffic Law and Procedure

**Location:** One Path Plaza, Journal Square Transportation Center, Jersey City, NJ.

**Length:** 52 hours.

**Dates:** January 1967—June 1981.

**Objective:** To provide the student with a practical working knowledge of traffic law and procedure in New York and New Jersey.

**Instruction:** A comprehensive study of New York and New Jersey traffic laws. Driving while intoxicated; Port Authority traffic law; traffic control/observation; defensive driving; traffic congestion (vehicle and pedestrian); police recruit motor patrol; leaving-the-scene violations; traffic restrictions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Traffic Law and Procedure (12/74).

## WATCH ENGINEER APPRENTICE TRAINING PROGRAM

The courses listed below constitute the Watch Engineer Apprentice Training Program, which is designed to prepare entrance-level personnel and high school recruits for employment within the Port Authority as watch engineers. Entrance-level personnel include laborers, building and ground attendants, maintenance men, helpers, and clerical staff with some prior knowledge of the mechanical trades. Selection for the program is on the basis of performance in a competitive examination; applicants must also have high school diplomas. Once selected, trainees are required to participate in a four-year program consisting of on-the-job training at various facilities and 175 three-hour evening classroom sessions. If a trainee does not maintain a satisfactory rating in his work performance and instructional training at any time during this four-year period, he is dropped from the program.

### 1. Air Pollution and Smoke Control
### 2. Boilers and Accessories
### 3. Engines

**Location:** Various Port Authority training facilities.

**Length:** 1. 24 hours.
2. 60 hours.
3. 30 hours.

**Dates:** January 1965—June 1981.

**Objective:** To provide an introduction to boilers, air pollution, smoke control, and steam engines necessary to train an apprentice as a journeyman watch or stationary engineer.

**Instruction:** Boiler construction and code; combustion of fuels; operation and maintenance of boilers; accessories; air pollution and smoke control; steam engines; steam turbines; auxiliary equipment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Marine Engineering, Stationary Engineering, or Heating, Air Conditioning, and Refrigeration. (9/75). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### Automatic Controls

**Location:** Various Port Authority training facilities.
**Length:** 33 hours (5 weeks).
**Dates:** January 1965—June 1981.

**Objective:** To provide the basic knowledge required to understand the control of heating, air conditioning, and refrigeration systems.

**Instruction:** Fundamentals of controls and measurement; electric control circuits; pneumatic control circuits.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Heating, Air Conditioning, and Refrigeration (9/75).

### Basic Electricity

**Location:** Various Port Authority training facilities.
**Length:** 72 hours (12 weeks).
**Dates:** January 1965—June 1981.

**Objective:** To provide the electrical background necessary for the watch engineer journeyman to understand and maintain electrical equipment within the mechanical trades.

**Instruction:** A survey course covering the following topics: Ohms Law; series, parallel, and series-parallel circuits; power; magnetism; generators; motors; controls.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Basic Electricity (9/75).

### Basic Mathematics

**Location:** Various Port Authority training facilities.
**Length:** 93 hours (15 weeks).
**Dates:** January 1965—June 1981.

**Objective:** To provide a foundation in trade-related mathematics necessary for electrical and watch engineer apprentice training programs.

**Instruction:** Whole numbers; fractions; decimals; percentage; power and roots; ratio and proportion; solution of equations in one variable; mensuration; triangles; slide rule. (Text used: *Basic Mathematics Simplified*, by C. Thomas Olivo.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Elementary Mathematics (9/75).

### Basic Physics

**Location:** Various Port Authority training facilities.
**Length:** 90 hours (15 weeks).
**Dates:** January 1965—June 1981.

**Objective:** To provide a foundation in trade-related science for the watch engineer apprentice training program.

**Instruction:** Properties of matter; mechanics and machines; magnetism and electrical energy; heat energy and heat machines; light energy; sound energy; electronics; nuclear energy. (Text used: *Fundamentals of Applied Physics*, by C. Thomas Olivo and Alan Wayne.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Elementary Physics (9/75).

### 1. Basic Refrigeration and Air Conditioning
### 2. Central Station Refrigeration Machines

**Location:** Various Port Authority training facilities.
**Length:** 1. 81 hours.
2. 15 hours.
**Dates:** January 1965—June 1981.

**Objective:** To provide the basic skills necessary in refrigeration and air conditioning to prepare an apprentice as a journeyman watch or stationary engineer.

**Instruction:** The refrigeration cycle; refrigerants; compressors; condensers; receivers; evaporators; metering devices; lubrication; psychometrics; central station refrigeration machines.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Refrigeration and Air Conditioning (9/75). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Blueprint Reading and Sketching

**Location:** Various Port Authority training facilities.
**Length:** 30 hours.
**Dates:** January 1965—June 1981.

**Objective:** To provide students with the fundamental skills necessary for the reading of blueprints.

**Instruction:** Lines and line quality; Three-View drawings; sectional views; orthographic sketching; working with blueprints; analyzing blueprints with an emphasis on HVAC and plumbing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Blueprint Reading (9/75).

### Boilers and Accessories

Refer to Air Pollution and Smoke Control.

### Central Station Refrigeration Machines

Refer to Basic Refrigeration and Air Conditioning.

### Engines

Refer to Air Pollution and Smoke Control.

## Shop and Field Work

**Location:** Various Port Authority training facilities.
**Length:** 7,328 hours (4 years).
**Dates:** January 1965—June 1981.

**Objective:** To provide the watch engineer apprentice with the on-the-job shop and field work necessary to become a journeyman watch or stationary engineer.

**Instruction:** Plant safety; use of hand tools; heating and ventilating; boilers; fuels; power plant auxiliaries; steam engines; steam and gas turbines; controls; instrumentation; pumps; valves; water supply; sanitation; fire protection.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 16 semester hours in Shop, Heating, Air Conditioning, and Refrigeration, or Stationary Engineering (9/75).

# PORT AUTHORITY OF NEW YORK AND NEW JERSEY–WORLD TRADE INSTITUTE

The World Trade Institute is the educational unit of the World Trade Center of New York City. The Institute's primary objective is to improve world trade by making individuals active in international business and finance more effective in performing their jobs and better equipped to cope with the frequent changes in the international business environment. Both the Institute and Center are activities of the Port Authority of New York and New Jersey.

The World Trade Institute's seminars and conferences draw participants from all sections of the United States and from many foreign countries. For residents of the New York—New Jersey—Connecticut area, the Institute offers job-oriented programs through its Evening School of World Trade and its Language School. The Evening School's instructors are drawn from experienced practitioners in the major specialized functions of international commerce and ocean transportation. Students are drawn from staff and supervisory-level personnel from the world trade community. All courses are practical in nature, dealing with actual documents and day-to-day problems confronting both the instructors and their students.

The Language School offers language training as an essential skill in world trade. Its method, too, is practical, providing its students with rapid acquisition of the speaking, comprehension, and reading ability they need on the job and in various social situations. Teachers are specially trained in this method, which eliminates role learning and stock phrases and enables the students to start speaking the new language at the very first session.

Source of official student records: Registrar, The World Trade Institute, One World Trade Center, 55th Floor, New York, New York 10048.

## EVENING SCHOOL OF WORLD TRADE

As of September 1977, courses offered by the World Trade Institute's Evening School of Trade have been meeting on a 12-week schedule (one evening per week for 2½ hours, totaling 30 hours of instruction) rather than the previous 15-week schedule (one evening per week for 2 hours, totaling 30 hours of instruction).

### Commodity Trading

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (12 weeks).

**Dates:** September 1972—Present.

**Objective:** To provide the student with an understanding of the mechanics of commodity futures trading, including legal requirements and responsibilities of the trader.

**Instruction:** The mechanics of futures trading; sources of commodity information; price trends and how to analyze them profitably; seasonal price trends; special characteristics and facts about the individual commodities; government price support and surplus disposal programs; the theory of hedging; advanced hedging procedures; price chart methods used for forecasting; "spreads and straddles" as a method for commodity speculation; rules for speculative trading. (Prerequisite: A course in Introduction to International Trade or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in International Trade (5/77).

### Customs Brokerage

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (12 weeks).

**Dates:** September 1972—Present.

**Objective:** To present an overview of procedures required to clear import merchandise through U.S. Customs.

**Instruction:** Types of entries; purpose; preparation and use of documents required; bill of lading; its value and endorsement; delivery order; classificiation of invoices; dutiable and non-dutiable charges; examination of merchandise (on dock, at public stores); value determination and collection of duties, cartage; transportation in bond; re-export; restricted items; prohibited items; Department of Health, Education and Welfare forms and procedures; conversion of currency; protests; immediate delivery entries, and drawback entries; custom bonds; power of attorney; liquidations. (Prerequisite: A course in Introduction to International Trade or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in International Trade (5/77).

## Export/Import Letter of Credit

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (12 weeks).

**Dates:** May 1977—Present.

**Objective:** To provide the student with a knowledge of the uses of letters of credit, with special emphasis on international trade.

**Instruction:** Various types of letters of credit; their effect on the buyer, the seller, and the banking institution; import credit; export credit; government credit; refinancing and banking acceptances. (Prerequisite: A course in Introduction to International Trade or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in International Finance or International Trade (5/77).

## Export Transportation Management (Export Traffic)

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (12 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide the student with an understanding of the requirements and practices applicable to a complete voyage of exportation from seller to ultimate consignee.

**Instruction:** Routing; shipping charges; insurance rate; packing and marking requirements; letter of credit; sight draft; open account; delivery to exporting carrier; obtaining export documentation; insurance; bank collection; checking freight bills for correct rate and computation; checking invoices from service organizations for correct rates; preparing and filing claims with common carriers when loss or damage is reported; preparing and filing claims with insurance companies; understanding marine insurance. (Prerequisite: A course in Introduction to International Trade or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate/category, 2 semester hours in International Trade (5/77). NOTE: This course covers a substantial portion of the material also covered in Import Transportation Management. Credit should not be awarded to a student for both courses.

## Import Transportation Management (Import Traffic)

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (12 weeks).

**Dates:** September 1976—Present.

**Objective:** To provide the student with an understanding of the requirements and practices applicable to a complete voyage of importation from the seller to ultimate consignee.

**Instruction:** Prerequisites for importing; arranging for customs clearance; reforwarding of cargo to ultimate consignee; essential aspects of marine cargo insurance; common carrier liability; containerization; cargo claims; interrelation of shipping documents in international transportation; important aspects of transportation of "in bond" cargo. (Prerequisite: A course in Introduction to International Trade or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in International Trade (5/77). NOTE: This course covers a substantial portion of the material also covered in Export Transportation Management. Credit should not be awarded to a student for both courses.

## Importing Techniques

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (12 weeks.)

**Dates:** September 1977—Present.

**Objective:** To provide an overview of the activities involved in the actual importation of goods, with strong emphasis on obtaining sources of goods and negotiating purchases.

**Instruction:** Type of import activity (direct, commission house, broker or factor, agencies); raw materials; finished products; terms and definitions; contracts; placing of orders; import duties; customs regulations; miscellaneous cost (inland freight, cartage, ocean transportation, warehousing, packing, consular fees, loading charges, export duties, stamps, etc.); documents; types of service available through banks, forwarders; carriers; customs brokers, insurance companies; consignments; samples; special licenses; methods of finance. (Prerequisite: A course in Introduction to International Trade or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in International Trade (5/77).

## Marine Insurance (Cargo)

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (12 weeks).

**Dates:** September 1973—Present.

**Objective:** To enable the student to properly understand the various policies used by ocean marine underwriters and the underwriter's function in relation to these policies and to the user or supplier of insurance.

**Instruction:** Arranging insurance; warranties, importance and types; duration of risk; perils insured against, including perils clauses; losses (partial, total constructive, general average, and salvage); valuation; types; miscellaneous clauses, including carrier clause; strikes, riots, and civil commotions insurance; War Risk insurance; subrogation; reinsurance; loss experience; loss prevention; evaluation of ocean cargo risks.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Insurance, International Trade, or Transportation (5/77).

### Maritime Law

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (12 weeks).

**Dates:** May 1977—Present.

**Objective:** To present the student with an overview of maritime law.

**Instruction:** History of maritime law; claims—development and formalities; bills of lading under C.O.G.S.A.; charter party obligations; collision, including cargo and hull liability; freight terminology—demurrage, dispatch and laytime; salvage rules; speed deficiencies, coverage under P. & I. protection; H. & M. insurance; York-Antwerp rules; personal injury claims; arbitration vs. court determination; unseaworthiness; the Jones Act.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Maritime Law (5/77).

### Ocean Transportation Accounting (Formerly Steamship Accounting)

**Location:** One World Trade Center, New York, NY.

**Length: Version 1:** 30 hours (12 weeks).
**Version 2:** Part I(Financial Fundamentals): 15 hours (6 weeks).
Part II (Financial Management): 15 hours (6 weeks).

**Dates: Version 1:** September 1972—September 1980.
**Version 2:** September 1980—Present.

**Objective:** To provide an understanding of the uniform system of accounts for maritime carriers and financial and managerial accounting for the U.S. Maritime Industry.

**Instruction:** Organization of financial department; general and administrative expenses; assets; liabilities; voyage accounting; revenue; documentation; vessel expenses; voyage expenses; vessel payrolls; container and barge expense; claims; agents; computer in steamship industry; regulatory agencies; financial statements; analysis of capital structure; subsidy accounting. (Prerequisite: Two years of college accounting.)

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Accounting or Transportation (5/77).

### Steamship Accounting (Maritime Accounting)

Refer to Ocean Transportation Accounting.

### U.S. Customs Law: A Problem Solving Approach

**Location:** One World Trade Center, New York, NY.

**Length:** 30 hours (12 weeks).

**Dates:** May 1977—Present.

**Objective:** To provide an understanding of U.S. Customs Law in order to minimize duties and avoid violations.

**Instruction:** Valuation of merchandise; classification of merchandise under tariff schedules; drawback; repayment of duties; countervailing duties imposed in connection with bounties and grants of exporting nation; dumping duties; marking requirements of imported goods; determining country of origin; quota restrictions; penalties and liquidated damages; restricted merchandise; importations prohibited; deferring or avoiding payment of duty; administrative agency procedures; judicial review of customs decisions; available remedies; research materials available for customs problem solving. (Prerequisite: A course in Introduction to International Trade or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in International Trade (5/77).

## LANGUAGE SCHOOL

### Intensive Spoken Spanish

**Location:** One World Trade Center, New York, NY.

**Length:** Individualized program (approximately 60-90 hours).

**Dates:** September 1972—Present.

**Objective:** To enable the participant to communicate with sufficient fluency in the Spanish language.

**Instruction:** Fundamentals of the spoken language with emphasis on pronounciation (sounds, rhythm, melody), active use of structure, everyday and specialized vocabulary, and idiomatic expressions. Self-paced program in a small group format with maximum opportunity for student participation.

**Credit recommendation:** In the lower division bac-

335

calaureate/associate degree category, 3-12 semester hours in Spanish, depending upon the level of proficiency achieved on the Language Proficiency Interview (orginally developed by the Foreign Service Institute) (7/76). NOTE: If a student obtains an exceptionally high score on the examination, and if the World Trade Institute supplies a detailed written evaluation of that student, a school may consider granting additional credit.

# THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

The Presbyterian Hospital in the City of New York at Columbia-Presbyterian Medical Center is a 1,300-bed nonprofit institution located in the Washington Heights section of Manhattan. With close to 10,000 employees, the Medical Center is New York City's largest private employer.

In addition to the medical, dental, and nursing schools of Columbia University, the Hospital has a broad range of approved programs in such areas as radiologic technology and occupational therapy. Supervisory and management training programs are conducted by the Employee Development Unit of the Personnel Department.

Source of official student records: Manager, Employee Development Unit, Presbyterian Hospital, 622 West 168th Street, New York, New York 10032.

## Medical Coding (ICD-9-CM)

**Location:** 622 West 168th Street, New York, NY.

**Length:** 40 hours (16 weeks).

**Dates:** November 1980—Present.

**Objective:** To provide paraprofessionals considering a career in medical coding with a basic understanding of the current medical coding system (ICD-9-CM).

**Instruction:** This course presents the International Classification of Disease, Ninth Revision, and assists participants to utilize this system in converting disease diagnoses and surgical procedures into an international numerical code which is used for statistical and recordkeeping purposes.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Health Sciences or Medical Secretarial Science (11/80).

## 1. Medical Terminology I
## 2. Medical Terminology II

**Location:** 622 West 168th Street, New York, NY.

**Length:** 1. 40 hours (16 weeks).
2. 35 hours (14 weeks).

**Dates:** 1. October 1980—Present.
2. February 1981—Present.

**Objective:** To provide paraprofessionals with an understanding of basic medical terminology, including roots, prefixes, and suffixes as applied to each body system; to improve communications among medical personnel.

**Instruction: Course 1:** General body structure and function; skeletal system; muscular system; integumentary system; circulatory and lymphatic systems; respiratory system; gastrointestinal system. **Course 2:** Reproductive system; urinary system; endocrine system; nervous system; special senses; multiple system diseases. Medical insurance claims. Exercises with hospital reports are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Health Science or Medical Secretarial Science (11/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

# PROGRAM MANAGEMENT SUPPORT SYSTEMS, INC.

Program Management Support Systems, Inc. provides management, training, and technical assistance to public and private organizations in New York State. Courses and seminars are offered regularly in such areas as grantsmanship, human resources development, counseling, financial management, and program evaluation. Additional training activities are developed and delivered upon request for New York City community-based organizations. Through individual and group consultation, technical assistance services are provided in proposal writing, problem solving, resources development, and organizational development.

Source of official student records: Executive Director, Program Management Support Systems, Inc., 349 Broadway, New York, New York 10013.

## Financial Practices for Non-Financial Personnel

**Location:** 305 Broadway, New York, NY.

**Length:** 36 hours (6 days).

**Dates:** March 1978—June 1981.

**Objective:** To provide participants with an understanding of the terminology of accounting and finance, an overview of financial reporting, and the skills necessary for planning and preparing a budget.

**Instruction:** Functions of an accounting system; basic financial statements; introduction to nonprofit accounting; the budget document; nonprofit accounting systems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Accounting or Finance (6/79).

## Management of Human Resources

**Location:** 349 Broadway, New York, NY; various locations throughout New York City.

**Length:** 72 hours (4 weeks).

**Dates:** November 1977—June 1981.

**Objective:** To acquaint participants with the basic concepts of management and organization, with special attention given to the nonprofit organization.

**Instruction:** Approaches to management; management functions; organization development; accounting practices for management; personnel administration; group dynamics; marketing management; the behavioral sciences and management. The course format includes lecture, discussion, role-play exercises, and case study analyses.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Basic Management (10/78).

# READING REFORM FOUNDATION

The Reading Reform Foundation, which was established in 1961, is a nonprofit voluntary organization whose goal is to have intensive phonics used as the base for the early teaching of reading. It is a nationwide organization with headquarters in Scottsdale, Arizona, and committees in most states. The Foundation recommends more than 100 published phonic and linguistic methods of teaching reading.

A large part of the Foundation's effort in reading reform is devoted to providing workshops and courses in which classroom teachers can learn the multisensory phonics approach. The course listed below is one such course that is offered in New York State. Please note that the credit recommendation applies only to the locations indicated.

Source of official student records: Reading Reform Foundation, 119 East Hartsdale Avenue, Hartsdale, New York 10530.

## *The Writing Road to Reading*
### by Romalda B. Spalding
**(Formerly You Can Teach Johnny to Read)**

**Location:** Reading Reform Foundation, 119 East Hartsdale Avenue, Hartsdale, NY; locations throughout New York State.

**Length:** 30 hours (7 weeks).

**Dates:** April 1977—Present.

**Objective:** To provide the participant with the training needed to teach writing, spelling, and reading using a specific method of multisensory intensive phonics instruction.

**Instruction:** Overview of the Spalding method for the teaching of basic writing, spelling, and reading (*The Writing Road to Reading*); manuscript and cursive writing of the 26 letters of the alphabet (phonograms 1-26 of the English language) and their sounds; combination of letters (phonograms 27-70) and their sounds; dictation of Ayres list words and the correct markings to identify phonogram sounds; spelling rules and special spelling situations; syllabication.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Educational Methods, Elementary Education, or Reading; or in the graduate degree category, 1 semester hour in Education Methods, Elementary Education, or Reading (4/77). NOTE: Credit is recommended only for the 30-hour course.

# RED HOOK FAMILY DAY CARE TRAINING CENTER OF NEW YORK

The Red Hook Family Day Care Training Center of New York was established in 1972 to provide day care training for persons who care for children in their homes. Training modules and resource materials have been developed to enable the Center's outreach teachers to offer training services throughout New York City in 35 Cluster Programs. Training sessions are geared to equip the home day care providers, known as provider teacher-parents, with a range of skills that will enable them to give the children an educational experience rather than to merely provide a babysitting service. Training is conducted at the various centers using community resouces and responding to particular needs as identified by Family Day Care staff and parents.

Source of official student records: Educational Director, Red Hook Family Day Care Training Center, 500 Eighth Avenue, Room 1020, New York, New York 10018.

## Children's Literature

**Location:** 500 Eighth Avenue, New York, NY; 35 Cluster Centers throughout New York City.

**Length:** 30 hours (15 weeks).

**Dates:** April 1976—June 1981.

**Objective:** To enable the day care parent to understand that children's literature assists in strengthening the child's basic motivation for learning by developing language skills; to familiarize the parent with good literature for young children through the analysis of children's books.

**Instruction:** Relevance of literature in a child's life; book assessment skills; racism and sexism in children's literature; reading readiness concepts and skills; types of books and their uses; producing a book; agencies and persons in the field; poetry for children; storytelling; nursery rhymes.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Children's Literature (1/76).

## The Creative Experience: Developmental Activities for Young Children in Family Day Care

**Location:** 500 Eighth Avenue, New York, NY; 35 Cluster Centers throughout New York City.

**Length:** 40 hours (20 weeks).

**Dates:** January 1976—June 1981.

**Objective:** To enable the day care parent to understand the importance of creative activities in a child's development and ways in which creative expression can be encouraged.

**Instruction:** Exploration of ways in which creative activities can be used constructively with children, with emphasis on practical home experiences. Clay play; block building; fingerpainting; potato printing; water play; music; puppetry; graphic techniques; crayon resist; ink wash-off; murals; montage; papier mache; paper bag masks; arts and crafts; edible arts; line fantasies; school-age crafts; woodworking.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Early Childhood Education (1/76).

## Health, Safety, and Nutrition Issues in Family Day Care

**Location:** 500 Eighth Avenue, New York, NY; 35 Cluster Centers throughout New York City.

**Length:** 30 hours (15 weeks).

**Dates:** September 1975—June 1981.

**Objective:** To provide the day care parent with knowledge of health, nutrition, and safety and their effect on the growth and development of children.

**Instruction:** Positive aspects of health (hygiene and good eating habits); children's diseases; emergency first aid procedures; accident prevention; fire emergencies; safety hazards in the home; meal planning and the necessity for a well-balanced diet; consumer education.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Early Childhood Education, Family Living, Home Economics, Nursing, or Nutrition (1/76).

## Math and Concept Development

**Location:** 500 Eighth Avenue, New York, NY; 35 Cluster Centers throughout New York City.

**Length:** 30 hours (15 weeks).

**Dates:** September 1975—June 1981.

**Objective:** To familiarize the day care parent with the many materials and activities available to enable them to help children develop mathematical skills and concepts.

**Instruction:** Subject areas of mathematics; approaches to teaching mathematics; mathematical concepts of logic and problem solving, sets, numbers, arithmetic functions, measurements, geometry, and probability.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Early Childhood/Elementary Education (1/76).

## Science for Children in Family Day Care

**Location:** 500 Eighth Avenue, New York, NY; 35 Cluster Centers throughout New York City.

**Length:** 30 hours (15 weeks).

**Dates:** September 1975—June 1981.

**Objective:** To introduce the day care parent to simple scientific activities for children and to help them understand that children learn scientific concepts through everyday living.

**Instruction:** Sensory concepts for young children; plant exploration; animal exploration; anatomy and hygiene; physical forces other than life forces; food experiments; water play.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Early Childhood/Elementary Education (1/76).

## Stages and Patterns of Growth and Development for Children in Family Day Care

**Location:** 500 Eighth Avenue, New York, NY: 35 Cluster Centers throughout New York City.

**Length:** 30 hours (15 weeks).

**Dates:** January 1976—June 1981.

**Objective:** To provide the day care parent with knowledge and understanding of the process of child growth and development from birth through adolescence.

**Instruction:** Fundamentals of child development: prenatal care; infant care; physical, mental, and social needs of toddlers, preschoolers, school-aged children, and adolescents. Methods and materials: analysis, observation, and implementation of activities that will enrich the development of children from infancy through adolescence. Trends and issues of child development: controversial topics, theories of well-known educators. Sex identification and sex education.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Child Development (1/76).

# ST. LUKE'S-ROOSEVELT HOSPITAL CENTER

St. Luke's-Roosevelt Hospital Center is a modern health-care facility with more than 1,250 beds and more than 5,000 employees. It provides a broad range of clinical services and out-patient clinics.

Created by merger in 1979, the Hospital Center has two sites: The Roosevelt Hospital site, at 428 West 59th Street, and the St. Luke's Hospital Center site, at Amsterdam Avenue and West 114th Street. Both sites are in Manhattan.

The Hospital Center offers a broad range of approved training programs in medical specialties. Management development and supervisory skills training, as well as programs in clerical skills and technical training, are offered by the Hospital Center's Personnel Department. The Nursing Department provides many courses in nursing skills.

Source of official student records: Director of Training, St. Luke's-Roosevelt Hospital Center, Amsterdam Avenue and West 114th Street, New York, New York 10025.

### Medical Coding (ICD-9-CM)

**Location:** St. Luke's-Roosevelt Hospital Center, Amsterdam Avenue and West 114th Street, New York, NY.

**Length:** 30 hours (15 weeks).

**Dates:** April 1979—June 1981.

**Objective:** To provide paraprofessionals considering a career in medical coding with a basic understanding of the current medical coding system (ICD-9-CM).

**Instruction:** This course presents the International Classification of Disease, Ninth Revision, and assists participants to utilize this system in converting disease diagnoses and surgical procedures into an internationally-used numerical code which is used for statistical and recordkeeping purposes.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Health Sciences or Medical Secretarial Science (1/79).

### Medical Terminology

**Location:** St. Luke's-Roosevelt Hospital Center, Amsterdam Avenue and West 114th Street, New York, NY.

**Length:** **Version 1:** 45 hours (15 weeks).
**Version 2:** 60 hours (15 weeks).

**Dates:** **Version 1:** February 1977—May 1978.
**Version 2:** December 1978—June 1981.

**Objective:** To provide paraprofessional medical workers with an understanding of basic medical terminology, including basic root words, prefixes, and suffixes, and to improve their communications with other medical personnel.

**Instruction: Versions 1 and 2:** Participants are assisted in developing familiarity with medical terminology in order to understand appropriate disease and disability words relating to each of the systems in the human body. **Version 2:** The topics are treated in greater depth than in Version 1.

**Credit recommendation: Version 1:** In the lower division baccalaureate/associate degree category, 2 semester hours in Health Sciences or Medical Secretarial Science (1/79). **Version 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Health Sciences or Medical Secretarial Science (1/79).

### Motivational Dynamics

**Location:** St. Luke's-Roosevelt Hospital Center, Amsterdam Avenue and West 114th Street, New York, NY.

**Length:** 36 hours (12 weeks).

**Dates:** November 1975—June 1981.

**Objective:** To improve the effectiveness of practicing first-line supervisors through increased knowledge of management practices and the behavioral sciences and their application on the job.

**Instruction:** Overview of motivational theory (McGregor, Freud, Maslow, and Herzberg); group dynamics; productivity and the maintenance of morale; effective supervision; participative management; the change process; the communication process; management by objectives; organizational development. The course includes lectures, discussion, video presentations, role plays, case studies, and in-basket exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Behavioral Science or Management (8/75).

## NURSING SERVICE DEPARTMENT

Source of official student records: Director of Nursing, St. Luke's-Roosevelt Hospital Center, Amsterdam Avenue and West 114th Street, New York, New York 10025.

## Critical Care Nursing

**Location:** St. Luke's-Roosevelt Hospital Center, Amsterdam Avenue and 114th Street, New York, NY.

**Length:** 66½ hours (4 weeks); approximately 45 additional hours are devoted to supervised clinical experience.

**Dates:** August 1978—June 1981.

**Objective:** To prepare participants to assume the responsiblities of beginning staff nurses in a critical care unit.

**Instruction:** Review of basic sciences; cardiac arrhythmias; care of the respiratory patient; cardiopulmonary resuscitation; care of the patient with disorders of the cardiovascular system; care of the neurological patient; critical care nursing. There is additional specialized instruction for intensive care unit, coronary care unit, emergency room, and kidney transplant nursing, with appropriate supervised clinical experience.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Nursing (1/79).

## Hemodialysis

**Location:** St. Luke's-Roosevelt Hospital Center, Amsterdam Avenue and 114th Street, New York, NY.

**Length:** 60 hours (4 weeks); 60 additional hours are devoted to supervised clinical experience.

**Dates:** May 1978—June 1981.

**Objective:** To prepare participants to assume the responsibilities of beginning staff nurses in a hemodialysis unit.

**Instruction:** History and principles of hemodialysis; treatment modalities; renal pathophysiology; fluids and electrolytes; hemodynamics; hemodialysis equipment; care of the hemodialysis patient; renal transplantation.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Nursing (1/79).

# SEAMEN'S CHURCH INSTITUTE OF NEW YORK

The Seamen's Church Institute of New York, founded in 1834, is a social service agency related to the Episcopal Church and dedicated to the welfare of seafarers in the Port of New York without any restrictions as to their race, religion, nationality, or sex. It is located in Lower Manhattan.

## FRANKLIN D. ROOSEVELT INSTITUTE OF MARITIME AND GENERAL STUDIES

The Franklin D. Roosevelt Institute of Maritime and General Studies was established in 1973 as an evening program to serve the specific educational and training needs of the shore-based employees of the maritime and related industries and of government agencies concerned with maritime affairs, which are located in the metropolitan New York City area. (It was named for the late President as a memorial for the 38 years he served as a member of the board of managers of the Seamen's Church Institute.) Courses cover the full range of maritime transportation in the context of contemporary intermodal procedures. A Certificate in Maritime Transportation is issued to a student upon successful completion of a program of six courses (four required and two elective).

Source of official student records: Registrar, Franklin D. Roosevelt Institute, Seamen's Church Institute, 15 State Street, New York, New York 10004.

### Basic Ocean Transportation

**(Formerly Modern Ocean Transportation)**

**Location:** 15 State Street, New York, NY.

**Length:** 24 hours (12 weeks).

**Dates:** September 1973—Present.

**Objective:** To provide the student with a survey of the previous and current functions of break-bulk and tramp operations in modern ocean transportation.

**Instruction:** History of ocean transportation; types of vessels; shoreside management and office procedures; labor union and industry organizations; bills of lading and other documentation; the shipping conference system.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Transportation Operations and Management (2/76).

### Computer Concepts for the Transportation Industry

**(Formerly EDP (Computer) Techniques for the Transportation Industry)**

**Location:** 15 State Street, New York, NY.

**Length:** 24 hours (12 weeks).

**Dates:** September 1973—Present.

**Objective:** To provide the student with an introduction to electronic data processing in the maritime transportation industry.

**Instruction:** Introduction to computers and electronic data processing. Computer hardware and software; data communications; system design and logic; data processing applications in the transportation industry.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Transportation Operations and Management (2/76).

### Container Control and Terminal Operations

**Location:** 15 State Street, New York, NY.

**Length: Version 1:** 24 hours (12 weeks).
**Version 2:** 30 hours (15 weeks).

**Dates: Version 1:** January 1975—January 1981.
**Version 2:** February 1981—Present.

**Objective:** To provide the student with an understanding of the methodology for the flow and control of traffic through a container terminal.

**Instruction:** An overview of the operation of container terminals, with specific attention to: types of container vessels; terminal operations and design; the effect of regulations and associations on terminal operations; and equipment control.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Transportation Operations and Management (2/76).

### EDP (Computer) Techniques for the Transportation Industry

Refer to Computer Concepts for the Transportation Industry.

### Intermodal Transportation and Containerization

**(Formerly Intermodal Transportation/Containerization and Pricing)**

**Location:** 15 State Street, New York, NY.

**Length:** 24 hours (12 weeks).

**Dates:** September 1973—Present.

**Objective:** To provide the student with an understanding of current intermodal procedures and regulations.

**Instruction:** Containerization; intermodal and multimodal transportation; intermodal pricing; regulatory agencies and transportation law; documentation procedures; computerization in transportation; advanced concepts in material handling and distribution. (Prerequisite: Basic Ocean Transportation.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Transportation Operations and Management (2/76).

## Intermodal Transportation/Containerization and Pricing

Refer to Intermodal Transportation and Containerization.

## Modern Ocean Transportation

Refer to Basic Ocean Transportation.

## Modern U.S. Domestic Transportation

**Location:** 15 State Street, New York, NY.

**Length:** **Version 1:** 24 hours (12 weeks).
**Version 2:** 30 hours (15 weeks).

**Dates:** **Version 1:** January 1974—January 1981.
**Version 2:** February 1981—Present.

**Objective:** To provide the student with an overview of the current status of the United States Domestic Transportation Industry.

**Instruction:** Description of various modes of transportation (railroads, motor carriers, pipelines, water carriers, and airlines); carrier obligations; freight classification and tariffs; freight rate structures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Transportation Operations and Management (2/76).

## Pricing Techniques for Intermodal Transportation

**(Formerly Pricing Techniques for the Transportation Industry)**

**Location:** 15 State Street, New York, NY.

**Length:** 24 hours (12 weeks).

**Dates:** September 1975—Present.

**Objective:** To provide the student with the basics of the transportation pricing function within the maritime industry.

**Instruction:** Overview of pricing techniques for intermodal transportation; transportation and economic growth; supply and demand; theory of costs; shipping costs and their relation to freight rates; structure of the freight rate system; the shipping conference system and free markets; government and its role in transportation pricing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Transportation Operations and Management (2/76).

## Pricing Techniques for the Transportation Industry

Refer to Pricing Techniques for Intermodal Transportation.

## Transportation Regulatory Law

**(Formerly U.S. Government Transportation Regulations)**

**Location:** 15 State Street, New York, NY.

**Length:** 24 hours (12 weeks).

**Dates:** January 1974—Present.

**Objective:** To provide the student with a working knowledge of government regulations of transportation.

**Instruction:** Legal basis of the Federal regulatory functions; the Interstate Commission and the Interstate Commerce Act; the Federal Maritime Commission and the Shipping Act; the Antitrust Acts; U.S. Customs Regulations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Transportation Operations and Management (2/76).

## U.S. Government Transportation Regulations

Refer to Transportation Regulatory Law.

# SOUTH NASSAU COMMUNITIES HOSPITAL

South Nassau Communities Hospital, located in Oceanside, New York, is a 401-bed facility affiliated with the State University of New York at Stony Brook. With a medical staff of approximately 525 physicians and surgeons, the hospital possesses the most advanced diagnostic and treatment apparatus available for the care of more than 45,000 patients annually.

## SCHOOL OF RADIOLOGIC TECHNOLOGY

The School of Radiologic Technology at South Nassau Communities Hospital was established in 1945, and in April 1979 a new, ten-room department of radiology was opened. The primary objective of the 24-month program of classroom and clinical instruction is to provide didactic and clinical training in the practice of radiography. The individual is trained to perform the duties of a radiographer at the high level of competence required by the American Registry of Radiologic Technology as well as by the New York State Department of Health, Bureau of Radiologic Technology. The limited number of students is advantageous, offering almost individual supervision in the classroom. The students' clinical performances are closely supervised by the director of education, the radiologist, and the licensed radiographer.

Source of official student records: Registrar, School of Radiologic Technology, South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, New York 11572.

### Clinical Practicum I, II, III, and IV (Clinical Education)

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** Minimum of 2,200 hours (2 years).

**Dates:** June 1977—Present.

**Objective:** To allow the student to obtain experience in the practice of radiological technology in a controlled clinical setting.

**Instruction:** Students function as learning members of the hospital's radiology department. Experience is provided in patient preparation, selection of proper techniques for radiographic analysis, and administration of ionizing radiation for the purpose of diagnostic examination with appropriate radiation protection control. Close supervision is provided to develop and evaluate the students' clinical skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 12 semester hours in Allied Health Sciences or Radiography (10/80). NOTE: Parts I, II, III, and IV must all be completed to receive credit.

### 1. Film Evaluation I
### 2. Film Evaluation II
### 3. Film Evaluation III
### 4. Film Evaluation IV
### (Film Critique)

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 1. 20 hours (10 weeks).
2. 20 hours (10 weeks).
3. 20 hours (10 weeks).
4. 20 hours (10 weeks).

**Dates:** September 1978—Present.

**Objective:** To enable the student to evaluate and improve the diagnostic quality of a radiograph.

**Instruction:** Patient profile, pathology, and condition during radiographic examination; technical factors and focus-film distance; collimation and shielding; positioning; anatomy; radiographic quality. Radiographic film evaluation to identify topographic anatomic structures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Allied Health Sciences or Radiography (1/80). NOTE: Courses 1, 2, 3, and 4 must all be completed to receive credit.

### Imaging

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 30 hours (24 weeks).

**Dates:** February 1979—Present.

**Objective:** To provide the student with an analysis of the various modes of imaging systems.

**Instruction:** Intensifying screens; fluoroscopic screens; video recorders; video tubes; cine radiography; strip film camera; film changers. Special techniques used in radiographic imaging; duplication and subtraction; polaroid; thermography; ultrasound; xeroradiography; electron radiography.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences or Radiography (1/80).

## 1. Introduction to Radiologic Technology
## 2. Medical Ethics
## 3. Medical Terminology
## (Fundamentals of Radiography)

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 1. **Version 1:** 25 hours (20 weeks).
**Version 2:** 15 hours (4 weeks).
2. 5 hours (5 weeks).
3. 10 hours (10 weeks).

**Dates:** 1. **Version 1:** September 1978—August 1980.
**Version 2:** 15 hours (4 weeks).
2. September 1978—Present.
3. September 1978—Present.

**Objective:** To provide the student with an overview of the history of radiography and to introduce the student to the clinical aspects of training through knowledge of medical terminology, contrast media, and ethics.

**Instruction: Course 1, Version 1, and Courses 2 and 3:** History of radiology: discovery and major advancements; radiologic technology as a health profession specialty; organization of the hospital and the department of radiology. Professional ethics: definition, scope, and nature; confidentiality; the technologist's obligations; medicolegal problems and solutions; New York State licensure. Medical terminology: recognition of the written and spoken language of medicine; modifications of meaning; radiographic terms; medical abbreviations and symbols. **Course 1, Version 2, and Courses 2 and 3:** History of radiology: discovery and major advancements; radiologic technology as a health profession specialty; organization of the hospital and the department of radiology. Contrast media: basic forms; precautionary steps in preparation and administration; patient preparation. Professional ethics: definition, scope, and nature; confidentiality; the technologist's obligations; medicolegal problems and solutions; New York State licensure. Medical terminology: recognition of the written and spoken language of medicine; modifications of meaning; radiographic terms; medical abbreviations and symbols.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Radiography (1/80). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

## Medical Ethics

Refer to Introduction to Radiologic Technology.

## Medical Terminology

Refer to Introduction to Radiologic Technology.

## Methods of Patient Care
## (Nursing Procedures)

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** **Version 1:** 25 hours (20 weeks).
**Version 2:** 20 hours (20 weeks).

**Dates:** **Version 1:** September 1979—August 1980.
**Version 2:** September 1980—Present.

**Objective:** To provide the student with an understanding of the proper methods of assisting and moving the patient, basic first aid procedures, aseptic technique, and management of the seriously ill or injured patient.

**Instruction: Version 1:** Body mechanics; aseptic technique; management of seriously ill or injured patient (acute abdomen, fractures, and dislocations); patient reaction to iodinated contrast media; the emergency tray/cart; basic first aid; nursing procedures pertinent to radiology (anesthesia, operating room radiography, bedside radiography, and handling patients with communicable diseases). Contrast media: basic forms; precautionary steps in preparation and administration; patient preparation. **Version 2:** Body mechanics; aseptic technique; management of seriously ill or injured patient (acute abdomen, fractures, and dislocations); patient reaction to iodinated contrast media; the emergency tray/cart; basic first aid; nursing procedures pertinent to radiology (anesthesia, operating room radiography, bedside radiography, and handling patients with communicable diseases).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences (1/80).

## Pathology
## (Medical and Surgical Disease)

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 15 hours (11 weeks).

**Dates:** February 1979—February 1981.

**Objective:** To provide the student with an understanding of the effect on radiographic technique of changes that occur in disease and injury.

**Instruction:** Principles used in the identification of circulatory, degenerative, and neoplastic diseases; conditions of illness involving the systems of the body, with stress on radiographic technology.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Allied Health Sciences (1/80).

## 1. Positioning I
## 2. Positioning II
## 3. Positioning III (Advanced Positioning) (Radiographic Positioning)

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 1. 62 hours (26 weeks); includes 22 hours of laboratory work.
2. 60 hours (26 weeks); includes 20 hours of laboratory work.
3. 45 hours (25 weeks); includes 15 hours of laboratory work.

**Dates:** 1. September 1978—Present.
2. March 1979—Present.
3. September 1978—Present.

**Objective:** To enable the student to identify and follow the correct procedures in positioning patients for radiography.

**Instruction:** General positioning: radiography of upper and lower extremities; chest; shoulder; clavicle; scapula; pelvis and hip; ribs; bony thorax; vertebral column; gastrointestinal tract; urinary tract; skull. Positioning for pediatric radiography. Skull radiography: terminology; routine skull series; sella turcica; optic foramina; orbital structures; mastoid processes of temporal bones; temporal styloid processes; pars petrosae of temporal bones; paranasal sinuses; facial and nasal bones.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Allied Health Sciences or Radiography (1/80). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

## Principles of Radiographic Exposure

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 96 hours (26 weeks); includes 56 hours of laboratory work.

**Dates:** September 1978—Present.

**Objective:** To provide the student with an understanding of the principles involved in the formation of the latent radiographic image and their application to different situations.

**Instruction:** Definitions; characteristics of X-rays; formation of the latent image; intensifying and fluoroscopic screens; prime factors of radiographic exposure; factors controlling and affecting radiographic quality; beam restricting devices (collimators, cones, cylinders, and diaphragms); filters; grids; stereoscopy; conditions influencing choice of chart; kilovoltage and milliamperage; review of grid conversion factors; review of screen conversion factors; kilovoltage distance conversion factors; use of kilovoltage distance conversion factors; use of higher kilovoltages. Supervised laboratory experience is included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Allied Health Sciences or Radiography (3 lecture, 2 laboratory) (1/80).

## Radiation Biology

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 28 hours (26 weeks).

**Dates:** September 1978—Present.

**Objective:** To provide the student with a knowledge of the effects of ionizing radiation on biological systems.

**Instruction:** Short-term biological effects of ionizing radiation; long-term somatic effects of ionizing radiation; direct and indirect action of radiation; cell structure; radiation syndromes; radiation effects of mitosis; oxygen effect.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Allied Health Sciences or Biology (1/80).

## 1. Radiographic Anatomy and Physiology I
## 2. Radiographic Anatomy and Physiology II

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 1. 42 hours (25 weeks).
2. 27 hours (20 weeks).

**Dates:** 1. September 1978—Present.
2. June 1979—Present.

**Objective:** To provide the student with knowledge of the structure and function of the human body with emphasis on radiographic aspects.

**Instruction:** The body as an integrated whole: skeletal and articular systems; axial and appendicular skeleton; muscular system; integration and control of the body; circulatory and lymphatic systems; respiratory, digestive, and urinary systems; reproduction; endocrine system; fluids and electrolytes. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Allied Health Sciences or Biology (1/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

## Radiographic Processing

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** **Version 1:** 28 hours (28 weeks).
**Version 2:** 24 hours (24 weeks).

**Dates:** **Version 1:** February 1979—February 1980.
**Version 2:** February 1980—Present.

**Objective:** To enable the student to develop the knowledge and skills necessary to perform appropriate darkroom procedures, to identify the chemical constituents of processing solutions and their functions, to understand duplication of film and subtraction techniques, and to evaluate radiographic film characteristics.

**Instruction:** Darkroom procedures and chemical constituents and functions of processing solutions. Processing room design and function; photographic process; manual processing (the developer, rinsing, fixer, washing, and drying); preparation of solutions; automatic processing; radiographic film artifacts and their causes; silver reclamation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences or Radiography (1/80).

## Radiological Physics

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 45 hours (22 weeks).

**Dates:** September 1979—Present.

**Objective:** To provide the student with a knowledge of the general theories of physics as they apply to radiographic practice.

**Instruction:** Fundamentals of mathematics. Radiological physics: fundamental units; derived units; mechanics; matter; electrostatics; magnetism; electrodynamics; electromagnetism; transformers; X-ray tubes; roentgen rays; interaction of radiation and matter. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Allied Health Sciences or Radiological Physics (10/80).

## Special Procedures

**Location:** South Nassau Communities Hospital, 2445 Oceanside Road, Oceanside, NY.

**Length:** 25 hours (25 weeks).

**Dates:** July 1979—Present.

**Objective:** To provide the student with a knowledge of the supplementary procedures used in advanced technology.

**Instruction:** Supplementary procedures: myelograms; pneumoencephalograms and ventriculograms; arthrography; lymphangiograms; discography; vesiculography and prostatography; dacryocystography; hysterosaphinography; carioangiography; cerebral angiography; aortography; percutaneous transhepatic spleno-portogram; placentography and amniography; petroperitoneal pneumography; pelvic pneumography.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences or Radiography (1/80).

# SOUTHERN NEW ENGLAND TELEPHONE COMPANY

The Southern New England Telephone Company provides communication facilities and services to over 1,500,000 customers in the State of Connecticut. The Company employs approximately 12,000 persons, and is part of the nationwide Bell System. Communication services include facilities for the transmission and switching of voice, data, and television messages between people and/or machines.

The Company conducts training in several disciplines for the technical, administrative, and managerial development of its employees. Courses are task-oriented, as well as academic. The major focus is upon skills and knowledge relevant to the employee's job. Some courses are developed locally, while others are the product of a larger Bell System effort.

Employees are released from other work responsibilities while attending instructor-led and required self-paced courses. Some correspondence type (self-paced) courses are voluntary.

Source of official student records: Network Manager—Technical Manpower Development, Engineering Training Center, Room 503, 310 Orange Street, New Haven, Connecticut 06506.

### Engineering Economy

**Location:** Engineering Training Center, 310 Orange Street, New Haven, CT.

**Length:** 70 hours (2 weeks).

**Dates:** May 1977—Present.

**Objective:** To provide methods of evaluating alternative courses of action regarding the economic aspects of engineering decisions.

**Instruction:** Time value of money; financing; capital costs, including income tax effects; plant operating costs; present worth of equivalent annual costs; replacement/retirement; capital utilization criteria; rate of return. A complex computer-based case study is used to apply the concepts presented.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Engineering Economy (12/77).

### Engineering Mathematics (E200)

**Location:** Engineering Training Center, 310 Orange Street, New Haven, CT.

**Length:** 35 hours (5 weeks).

**Dates:** May 1972—Present.

**Objective:** To provide the student with basic mathematical skills to be used in solving engineering problems.

**Instruction:** Fractions; algebra; logarithms; trigonometry; vectors; numbering systems; probability statistics.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hours in Mathematics (12/77).

### Number One ESS (Electronic Switching Systems) Method of Operation

**Location:** Engineering Training Center, 310 Orange Street, New Haven, CT.

**Length:** 35 hours (1 week).

**Dates:** December 1977—Present.

**Objective:** To provide an overview of computer applications in a switching system.

**Instruction:** Basic introduction to the terminology, organization, and operation of the Electronic Switching System; an overview of the various components of the system and their functions, including call processing, traffic measurement, and service order arrangements; the location of the components on the system block diagram.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Computer Applications (12/77).

## ENGINEERING FUNDAMENTALS

The courses listed below make up the Engineering Fundamentals Program, which is self-paced, programmed instruction. The units in the program have been grouped together in order to establish appropriate credit recommendations. While credit recommendations have been made for the two separate groups of units, when awarding credit particular consideration should be given to those who have completed the total program.

### Basic Logic (E230)

Refer to Electrical Engineering Principles.

### Basic Transmission Principles (E280)

Refer to Electrical Engineering Principles.

350

## Codes and Coding (E220)

Refer to Engineering Mathematics.

## Computer Concepts (E250)

Refer to Electrical Engineering Principles.

## Electrical Engineering Principles

1. **Basic Logic (E230)**
2. **Basic Transmission Principles (E280)**
3. **Computer Concepts (E250)**
4. **Electrical Engineering Principles (E260)**
5. **Information Principles (E240)**

**Location:** Administered from Engineering Training Center, 310 Orange Street, New Haven, CT.

**Length:** Independent study.

**Dates:** December 1977—Present.

**Objective:** To provide the student with an introduction to electrical engineering principles.

**Instruction:** Basic physical concepts; direct current circuits; alternating current circuits; DC and AC measurements; introduction to electronics; logic; computer concepts; wave shaping; transmission lines; signal processing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Electrical Technology (12/77).

## Electrical Engineering Principles (E260)

Refer to Electrical Engineering Principles.

## Engineering Mathematics

1. **Codes and Coding (E220)**
2. **Mathematics (E200)**
3. **Numbering Systems (E210)**
4. **Statistics and Probability (E270)**

**Location:** Administered from Engineering Training Center, 310 Orange Street, New Haven, CT.

**Length:** Independent study.

**Dates:** December 1977—Present.

**Objective:** To provide the student with basic mathematical skills to be used in solving engineering problems.

**Instruction:** Fractions; algebra; logarithms; trigonometry; vectors; numbering systems; probability; statistics.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Mathematics (12/77).

## Information Principles (E240)

Refer to Electrical Engineering Principles.

## Mathematics (E240)

Refer to Engineering Mathematics.

## Numbering Systems (E210)

Refer to Engineering Mathematics.

## Statistics and Probability (E270)

Refer to Engineering Mathematics.

35

# SPERRY DIVISION OF SPERRY CORPORATION

The headquarters of the Sperry Division, which is located in Great Neck, New York, consists of Sperry Gyroscope, Sperry Marine Systems, and Sperry Systems Management. The division has a long history of producing high-technology products for ship navigation, guidance, and control and has branched into new areas of technology application, primarily computer-based traffic control and transportation systems.

Sperry's Program for Advancing Careers through Education (SPACE) is a voluntary, after-hours program available to all Great Neck employees. The program offers an extensive series of engineering and computer science courses as well as courses in management and general skills development.

Source of official student records: Management Development and Training Department, Sperry Division, Sperry Corporation, Great Neck, New York 11020.

## Advanced Control System Theory (T-602-1)

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 30 hours (15 weeks).

**Dates:** January 1974–June 1981.

**Objective:** To provide an introduction to selected topics in advanced control systems theory.

**Instruction:** Theoretical and practical aspects of selected topics in advanced control systems theory. Adaptive control systems (disturbances and parameter variations caused by the environment); statistical design of feedback control systems (statistical analysis of control systems in the presence of noise sources); sampled-data control systems (extension of conventional continuous control system techniques to sampled-data systems utilizing the z-transform); human transfer functions (linear, nonlinear, sampled-data and adaptive representations and uses); modeling utilizing time series theory (methods for determining transfer functions from actual input/output data).

**Credit recommendation:** In the graduate degree category, 2 semester hours in Engineering (5/75).

## Architecture of General Purpose Digital Computers (T-810-1)

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 31 hours (15 weeks).

**Dates:** September 1971–June 1981.

**Objective:** To provide the student with an understanding of the foundations of computer architecture.

**Instruction:** Single address computers of the Princeton class; bus structured architecture; micro programmable machines; microprocessors; distributed processing networks.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Computer Science (5/75).

## DMS 1100 Data Base Application and Implementation I and II (T-812-1 & 2)

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 60 hours (30 weeks).

**Dates:** September 1974–January 1979.

**Objective:** To provide the concepts and application involved in implementing a data base (DMS 1100) on a large-scale computer (Univac 1108).

**Instruction:** Concepts of data base implementation and compatible functions; detailed technical discussion of the methods used to program and use an integrated data base with DMS 1100.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 4 semester hours in Computer Science (5/75).

## Exec 8 Operating System I and II (T-806-1 & 2)

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 60 hours (30 weeks).

**Dates:** September 1971–November 1979.

**Objective:** To provide the student with a knowledge of the Univac 1108 Computer running under the Exec 8 Operating System.

**Instruction:** Mass storage file administration and control; run stream control; language processors; program construction and execution; data file manipulation; program diagnostic analysis.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 4 semester hours in Computer Science (5/75).

## Exec 8 Operating System I and II (T-806-1 & 2 Univac 1100 Operating System)

**(Formerly Exec 8 Operating System I and II [T-806-1 & 2])**

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 60 hours (30 weeks).

**Dates:** November 1979–June 1981.

**Objective:** To provide the student with a knowledge of the Univac 1100-80 Computer running under the Exec 8 Operating System.

**Instruction:** Mass storage file administration and control; run stream control; language processor; program construction and execution; data file manipulation; program diagnostic analysis.

error model is developed for a marine inertial navigation system.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Engineering (5/75).

### Principles of Traffic Control (T-607-1)

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 31 hours (15 weeks).

**Dates:** September 1969—June 1981.

**Objective:** To provide the student with the theoretical and practical aspects of traffic control.

**Instruction:** Fundamentals of traffic flow; signal timing; computerized signal systems; freeway traffic control; bus priority; rapid transit systems.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Engineering (5/75).

### Probability and Statistics I and II (T-103-1 & 2)

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 60 hours (30 weeks).

**Dates:** September 1965—June 1981.

**Objective:** To provide an introduction to the theory of probability and statistics.

**Instruction:** Combinations and permutations; probability; random variables; discrete and continuous distributions; moment generating functions; binomial, Poisson, and normal distributions; central limit theorem; sampling distributions; testing hypothesis; use of Chi-square, F, and Student's T distributions; point and interval estimation; regression and correlation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Mathematics (5/75).

### Selected Topics in Transportation Systems Analysis (T-608-1)

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 31 hours (15 weeks).

**Dates:** January 1974—June 1981.

**Objective:** To provide a knowledge of the application of system analysis, modeling, and simulation techniques to the design and development of large-scale traffic and transportation systems.

**Instruction:** System engineering techniques and applications suitable for the design and anlysis of large-scale transportation and traffic systems (system modeling and identification, queuing theory, system simulation). Freeway surveillance and control; control of traffic corridors; incident detection; simulation of freeway corridor systems; approaches applicable to the modeling of traffic flow; currently available computer programs which implement the techniques.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Engineering (5/75).

### Selection and Programming of Minicomputers (T-706-1)

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 31 hours (15 weeks).

**Dates:** September 1969—September 1978.

**Objective:** To provide an introduction to minicomputers and their application to system needs.

**Instruction:** Fixed-point versus floating point arithmetic index registers; cyclic and random access memory systems; microprogramming and simulation of the candidate computer on a large-scale general purpose machine; the need for peripheral support equipment and supporting software. The interrelationship of the programming task with the computer parameters of word length, memory, instruction repertoire, speed, and input/output is developed through the demonstration of actual problems.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Engineering (5/75).

### Selection and Programming of Minicomputers and Microprocessors (T-706-1)

**(Fomerly Selection and Programming of Minicomputers [T-706-1])**

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 31 hours (15 weeks).

**Dates:** September 1978—June 1981.

**Objective:** To provide an introduction to minicomputer and microprocessors and their application to system needs.

**Instruction:** Fixed-point versus floating point arithmetic index registers; cyclic and random access memory systems; microprogramming and simulation of the candidate computer on a large-scale general purpose machine; the need for peripheral support equipment and supporting software. The interrelationship of the programming task with the computer parameters of work length, memory, instruction repertoire, speed, and input/output is developed through the demonstration of actual problems.

**Credit recommendation:** In the graduate category, 2 semester hours in Engineering (5/75).

### Sonar System Seminar (T-403-1)

**Location:** Division Headquarters, Great Neck, NY.

**Length:** 30 hours (15 weeks).

**Dates:** September 1973—June 1981.

**Objective:** To provide the student with an understanding of the various functions performed by a sonar system and the hardware approaches for implementing them.

**Instruction:** Design techniques used in sonar systems; components of a modern digital sonar system;

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 4 semester hours in Computer Science (5/75).

### Fundamentals of Digital Computers (1-801-1)

**Location:** Division Headquarters, Great Neck, NY.
**Length:** 30 hours (15 weeks).
**Dates:** September 1970 – June 1981.

**Objective:** To provide a survey of the structure, functions, and basic applications of a general-purpose computer.

**Instruction:** An introductory level course offering instruction in the general use of general-purpose computers and their associated peripheral devices.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Data Processing (5/75).

### Industrial Psychology (M-413-1)

**Location:** Division Headquarters, Great Neck, NY.
**Length:** 30 hours (15 weeks).
**Dates:** January 1972 – June 1981.

**Objective:** To familiarize the student with the basic concepts of interpersonal relationships and behavior.

**Instruction:** The application of interpersonal behavior concepts to communication and behavior changes within an industrial environment. Learning; motivation; emotion; perception; communication process; barriers to communication.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Industrial Psychology (5/75).

### Introduction to Kalman Filtering Theory (T-108-1)

**Location:** Division Headquarters, Great Neck, NY.
**Length:** 31 hours (15 weeks).
**Dates:** September 1973 – June 1981.

**Objective:** To provide an introduction to optimal filter and control theory and their application.

**Instruction:** The basic theoretical concepts of linear regression and least squares. Review of underlying mathematical techniques; theory of optimal estimation (recursive filters, discrete and continuous Kalman filters); practical Kalman filter considerations (suboptimal filters, sensitivity analysis, computer restraints); optimal smoothing and nonlinear estimation.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Applied Mathematics or Engineering (5/75).

### Modern Control Theory and Application I and II (T-601-1 & 2)

**Location:** Division Headquarters, Great Neck, NY.
**Length:** 60 hours (30 weeks).
**Dates:** September 1972 – June 1981.

**Objective:** To provide an introduction to control system theory using both transfer function and state-variable appoaches; to illustrate applications to control problems in a wide variety of fields.

**Instruction:** The state-variable concept; state-variable signal-flow diagrams; state-equations; the transition matrix; transfer functions; performance criteria; techniques for determining control system stability; design of linear control systems; linear-state-variable feedback; linear modeling using time series theory; design of nonlinear control systems; discussion of topics of recent importance (dynamic programming, the maximum principle, Liapunov's stability criterion, Popov's method, and the circle criterion). Linear, nonlinear, and optimal control theory are presented from the viewpoint of the modern state-variable approach and compared with the classical transfer function approach. The development of theoretical topics is coupled with applications of the theory to engineering design and includes digital computer problems.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 3 semester hours in Engineering (5/75).

### Modern Methods in Computer Programming–Structured Programming (T-809-1)

**Location:** Division Headqurters, Great Neck, NY.
**Length:** 31 hours (15 weeks).
**Dates:** September 1974 – June 1981.

**Objective:** To provide the programmer with a systematic approach to program development through structured programming techniques.

**Instruction:** Present philosophy in structured programming. Problems encountered in the development of large systems; current techniques and solutions; proposed new methods of programming.

**Credit recommendation:** In the upper division baccalaureate category or in the graduate degree category, 2 semester hours in Computer Science (5/75).

### Principles and Techniques of Marine Inertial Navigation (T-504-1)

**Location:** Division Headquarters, Great Neck, NY.
**Length:** 31 hours (15 weeks).
**Dates:** September 1974 – June 1981.

**Objective:** To provide engineers with a fundamental background in marine inertial navigation theory.

**Instruction:** Introduction to basic principles and techniques of inertial navigation. Accelerometers and gyroscopes (theory, operating principles, dynamic behavior, error sources); coordinate frames and gimbal platforms; kinematics, dynamics, and associated error equations of instrumented gyro vertical, gyro-compass, and inertial navigator. A canonical computer technology as applied to sonar; the UYK-7, UYK-20, SP630, and SP900; sonar beam-forming and its implementation by various methods (analog delay line, shift register—DIMUS, digital computer, high-speed microprogrammable processor). Lectures are presented by specialists in each field.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Engineering or Marine Science (5/75).

## Sperry Supervisory Training Program (M-412-1)

**Location:** Division Headquarters, Great Neck, NY.
**Length:** 24 hours (12 weeks).
**Dates:** September 1970—June 1981.

**Objective:** To provide formal and informal training and experience in the major areas of supervisory skills.

**Instruction:** Basic supervisory training. The supervisor and his management job; communication; problem solving; motivation; leadership styles; planning; organizing; controlling; developmental coaching; interviewing; handling complaints and grievances.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Supervisory Management (5/75).

## Supervisory Counseling and Communication Techniques (M-414-1)

**Location:** Division Headquarters, Great Neck, NY.
**Length:** 30 hours (15 weeks).
**Dates:** September 1972—June 1981.

**Objective:** To improve the personal communication skills of supervisors and managers.

**Instruction:** Interpersonal relations and the importance of relationships between supervisors and employees. Principles, techniques, and styles of counseling; the communication process; barriers to communication; improving and understanding the functions of communication in business. Workshop seminar with emphasis on participation and involvement through the use of selected case studies.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Communications (5/75).

## Test Design and Data Evaluation (T-609-1)

**Location:** Division Headquarters, Great Neck, NY.
**Length:** 31 hours (15 weeks).
**Dates:** September 1974—June 1981.

**Objective:** To provide a knowledge of the application of statistical methods of design of tests and the evaluation of experimental results.

**Instruction:** Presentation of basic tools for designing tests and evaluating experimental results. Hypothesis testing; general regression model; computational methods; least squares; factorial design; interactive effects; covariance analysis. The presentation of theory emphasizes its use in drawing conclusions for real situations.

**Credit recommendation:** In the graduate degree category, 2 semester hours in Engineering (5/75).

355

# SUFFOLK COUNTY POLICE DEPARTMENT

The Suffolk County Police Department serves a population of 1-1/3 million people in the easternmost county on Long Island, New York. The Department employs 3,200 persons, and its headquarters is located in Hauppauge.

## RECRUIT TRAINING PROGRAM

The courses listed below make up the academic component of the Recruit Training Program conducted by the Suffolk County Police Department. This is an intensive 20-week program attended by all newly appointed officers of the Department. Personnel from surrounding townships and government agencies in the county also participate as students in the program.

All courses are taught by use of lecture and discussion, and role playing is used where appropriate. The courses are taught at the Suffolk County Police Academy in Westhampton.

Source of official student records: Director, Suffolk County Police Academy, Old Country Road, Westhampton, New York 11977.

### Criminal Investigation

**Length:** 53 hours.

**Dates:** December 1974—July 1976.

**Objective:** To acquaint the student with the basic principles of criminal investigation.

**Instruction:** A study of the skills and techniques necessary for conducting sound police investigations. Interviews and interrogations; identification and preservation of physical evidence; narcotics observation and informants; organized crime; those criminal activities requiring specialized investigatory procedures. The students apply the course topics in both the moot court setting and other role-play situations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Criminal Justice (5/75).

### Criminal Law and Procedure

**Length:** 98 hours.

**Dates:** December 1974—July 1976.

**Objective:** To provide the student with an understanding of the basic elements of criminal law and procedure.

**Instruction:** Constitutional law; all aspects of New York State criminal law; court structure; search and seizure; elements of arrest; use of force and discretion; probation/parole.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Criminal Justice (5/75).

### Patrol Procedures

**Length:** 55 hours.

**Dates:** December 1974—July 1976.

**Objective:** To acquaint the student with the multidimensional aspects of basic patrol procedures.

**Instruction:** An examination of patrol duties. Vehicle and traffic law; accident investigation; auto theft; civil disorders and riot control; public utilities problems; other situations faced by the patrol officer. Role playing is extensively used to simulate real-life situations which the officer may confront.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Criminal Justice (5/75).

### Physical Education

**Part 1: Developmental Activities**

**Part 2: First Aid**

**Part 3: Self-Defense**

**Length:** 145 hours; **Part 1:** 40 hours. **Part 2:** 45 hours. **Part 3:** 60 hours.

**Dates:** December 1974—July 1976.

**Objective:** To prepare the student for the physical and physiological demands involved in the work of a police officer.

**Instruction: Part 1:** Improving and maintaining physical fitness through exercises, conditioning activities, and competitive sports. Individual evaluation of various aspects of physical performance. **Part 2:** Theory and application of first-aid procedures in emergency situations; instruction in cardio-pulmonary resuscitation. **Part 3:** Theory and application of basic techniques and maneuvers incorporated in boxing, judo, aikido, and karate; emphasis on application of defensive skills to combative situations.

**Credit recommendation: Part 1:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Physical Education (5/75). **Part 2:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Physical Education (5/75). **Part 3:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Physical Education (5/75).

## Police Community Relations

**Length:** 64 hours.

**Dates:** December 1974—July 1976.

**Objective:** To introduce the student to some of the dynamics of the community so that he/she will be able to perform more effectively as a police officer.

**Instruction:** Practical applications of social science theory; black history; Spanish culture; family crisis intervention; ethical awareness; mentally disturbed persons; officer-violator relationship; orientation to available social services. Role playing is used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Criminal Justice (5/75).

# TEXACO, INC.

Texaco, Inc. is engaged in the worldwide production, refining, and marketing of crude oil and its products, including petrochemicals. At year end 1977, Texaco remained one of the largest industrial corporations in the United States, with total assets of nearly $19 billion. Texaco shareholders number more than 413,600, and some 70,600 individuals are employed by the company throughout the world.

The Manpower Planning and Development unit offers administrative and clerical training in universally needed skills to employees throughout the company. Approximately 1,000 employees benefit from the training services of the Manpower Planning and Development unit each year. The 23 individual departments within Texaco are responsible for skills training in their own specialized fields, such as accounting, marketing, and refining.

Source of official student records: Training Manager, Personnel and Corporate Service, Texaco, Inc., 2000 Westchester Avenue, White Plains, New York 10650.

## Advanced Management Development

**Location:** Various Texaco training facilities.

**Length:** 54 hours (8 days); residential.

**Dates:** August 1977—Present.

**Objective:** To provide the student with the opportunity to apply fundamental management principles through case studies.

**Instruction:** The following topics are treated through an extensive use of case studies: planning; organizing; motivating; controlling; job enrichment and enlargement; the behavioralists; managment sciences; social responsibilities of business; ecology; legal environment of business; labor relations; communications and information flow.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Management (2/78).

## Human Resource Management

**(Formerly Personnel Management)**

**Location:** Various Texaco training facilities.

**Length:** 72 hours (2 weeks); residential.

**Dates:** October 1976—Present.

**Objective:** To provide an overview of the behavioral aspects of managing an organization.

**Instruction:** Managing change; coaching and counseling; managing results; performance evaluation; communications; behavior modification; time management; motivation; team building and conflict management; negotiations and influence; leadership; self-development. Teaching approaches include group discussions, practical exercises, and case study analyses. (Prerequisite: Advanced Management Development.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Behavioral Aspects of Management (2/78).

## Leadership Skills

**Location:** Various Texaco training facilities.

**Length:** 32 hours (4 days); residential.

**Dates:** October 1976—Present.

**Objective:** To provide an understanding of basic supervisory principles and techniques for new managers.

**Instruction:** Leadership; knowing your employees' individual differences; understanding personality and behavior; communication; discipline; handling complaints and grievances; guiding and developing employees; job satisfaction and morale. Use of programmed instructional material, case studies, and post-assignment readings.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Management (2/78).

## Management Development

**Location:** Various Texaco training facilities.

**Length:** 40 hours (1 week); residential.

**Dates:** August 1977—Present.

**Objective:** To provide an introduction to the principles and practices of management.

**Instruction:** Planning; organizing; motivating through leadership, human relations, communications, and instruction and development; controlling. Use of in-basket exercises, case studies, and post-assignment readings. (Prerequisite: Leadership Skills.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Management (2/78).

## Personnel Management

Refer to Human Resource Management.

# UNION CARBIDE CORPORATION

Union Carbide Corporation's diversified portfolio of business includes operations in five major industry segments: chemicals and plastics; gases and related products; metals and carbons; home and automotive products; and specialty products. With consolidated sales of more than $9 billion in 1979, Union Carbide Corporation ranked among the 25 largest industrial companies in the United States, and among the 50 largest in the world.

The Corporate Management Development Department provides training and development opportunities for Union Carbide's 100,000 employees worldwide. Seminars and workshops are conducted by experienced trainers using the techniques of lecture, group discussion, simulation, case studies, and practical application. Follow-up services are also provided to participants.

Source of official student records: Management Development Department, Union Carbide, 270 Park Avenue, 40th Floor, New York, New York 10017.

## Executive Finance and Accounting

**Location:** National Conference Center, East Windsor, NJ.

**Length:** 32 hours (4 days).

**Dates:** March 1975—Present.

**Objective:** To broaden the manager's understanding of corporate financial analysis and reporting and the role of financial and managerial accounting in planning, organizing, and evaluating corporate strategies.

**Instruction:** Financial statements; analysis of financial statements; managerial aspects including budgets and alternative courses of action.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Finance or Managerial Accounting (6/79).

# UNITED CEREBRAL PALSY ASSOCIATIONS OF NEW YORK STATE, INC.

United Cerebral Palsy Associations of New York State is a voluntary health agency which serves as a central, statewide organization to provide assistance to local affiliates dealing with the problems of cerebral palsy and other developmental disabilities. The Association plans, promotes, and assists in the establishment, maintenance, and operation of training centers, educational facilities, rehabilitation facilities, and other clinics throughout the State.

The Association provides inservice training and education to its professional and nonprofessional staff, conducts seminars throughout the State in all aspects of the developmental disability field, and, under contract with the New York State Office of Mental Retardation and Developmental Disabilities, provides inservice training to direct-care personnel at several developmental centers.

Source of official student records: Director, Program Services, United Cerebral Palsy Associations of New York State, Inc., 815 Second Avenue, New York, New York 10017.

### Anatomy and Physiology of the Speech Mechanism

**Location:** Locations in New York City: Brooklyn Developmental Center; Nina Eaton Center; Willowbrook Developmental Center; UCPA classrooms.

**Length:** 42 hours (14 weeks).

**Dates:** January 1978—Present.

**Objective:** To provide the student with a comprehensive understanding of oroneuromotor development and respiratory function under normal and pathological conditions; to enable the student to clinically apply assessment skills specific to orofacial pathology and relative to a developmentally disabled population.

**Instruction:** Musculature of the speech mechanism (orofacial, thoracic, and abdominal), including origins and insertions, function, and innervation; orofacial kinesiology as it relates to sucking, swallowing, chewing, and facial expression; stages in normal oroneuromotor maturation and the influence of cerebral palsy and other neuromotor disabilities; relationships between respiratory-phonatory-articulatory mechanisms during speech production; function of the respiratory system during vegetative and speech breathing; influences of abnormal muscle tone on the respiratory-phonatory-articulatory complex; craniofacial anomalies and their influence on oromotor function; components of the peripheral speech mechanism examination and implications of findings; components of neurodevelopmental assessment and the formulation of basic treatment needs; physiologic requirements for phoneme production; language developmental stages (phonalogy, syntax, and semantics); discussion and application of theories supporting motokinesthetic therapy; rationale and application of myofunctional therapy to the handicapped population; literature concerning central mechanisms controlling linguistic functions.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Allied Health Sciences or Developmental Disabilities (9/77).

### An Integrated Neurophysiological Approach Toward Management of an Institutionalized Multiple-Handicapped Population

**Location:** Locations in New York City: Brooklyn Developmental Center; Nina Eaton Center; Willowbrook Developmental Center; UCPA classrooms.

**Length:** 75 hours (15 weeks).

**Dates:** January 1978—Present.

**Objective:** To enable the student to develop skill in assessment and treatment/program planning for an institutionalized multiple-handicapped population using an interdisciplinary team.

**Instruction:** Interdisciplinary assessment of a developmentally disabled individual and planning a multi-disciplined program. Integration of theoretical approaches, professions, and residents; rules of stimulation and response; autonomic nervous system; oral motor development, dysfunction, and feeding problems; motion as stimulation; muscles, joints, posture, and movement; perceptual development; sensory motor integration. The course includes classroom lecture/discussion and laboratory sessions.

**Credit recommendation:** In the graduate degree category, 3 semester hours in Allied Health Sciences or Developmental Disabilities (9/77).

### Management of the Blind and Partially Sighted

**Location:** Locations in New York City: Brooklyn Developmental Center; Nina Eaton Center; Willowbrook Developmental Center; UCPA classrooms.

**Length:** 34 hours (15 weeks).

**Dates:** January 1978—Present.

**Objective:** To provide the student with an understanding of the normal and abnormal physiological processes of the eye, and to provide the skills necessary to rehabilitate the blind or visually handicapped in society.

**Instruction:** Physiological and sociological problems of the blind in society; anatomy and physiology of the eye; eye disorders (etiology, pathology, and treatment); orientation and mobility skills; analysis of the components of an activity and their adaptation to the blind population; adaptive aids in communication, mobility, and personal care; communication skills; Federal, State, and local legislation and regulations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Allied Health Sciences or Developmental Disabilities (9/77).

### 1. Normal Growth and Development (Baccalaureate Level)

### 2. Normal Growth and Development (Graduate Level)

**Location:** Locations in New York City: Brooklyn Developmental Center; Nina Eaton Center; Willowbrook Developmental Center; UCPA classrooms.

**Length:** 75 hours (15 weeks).

**Dates:** January 1978—Present.

**Objective: Course 1:** To provide the student with a basic understanding of normal growth and development as it pertains to factors interfering with development. **Course 2:** To provide the student with advanced concepts of normal growth and development and the ability to use them in dealing with the developmentally disabled.

**Instruction:** Developmental stages (sensorimotor interrelationships and causative factors of interference); neurological basis of movement; evolution of voluntary movement; reflexive substrata (normal reflexive development); equilibrium reactions (developmental stages, components, and assessment); control of movement: components, stages, assessment, and remediations of sensorimotor integration; components and stages of speech and cognitive development; current issues in the study of normal development. Both courses include classroom lecture/discussion, laboratory sessions, and a case study report. (Prerequisite for Course 2: baccalaureate degree in a related health specialty.)

**Credit recommendation: Course 1:** In the upper division baccalaureate category, 3 semester hours in Allied Health Sciences or Developmental Disabilities (9/77). **Course 2:** In the graduate degree category, 3 semester hours in Allied Health Sciences or Developmental Disabilities (9/77).

### Normal Growth and Development (Graduate Level)

Refer to Normal Growth and Development (Baccalaureate Level).

# UNITED NEW YORK AND NEW JERSEY SANDY HOOK PILOTS' ASSOCIATION

The Sandy Hook Pilots began in 1694 when the Colony of New York passed an act appointing four pilots to assist vessels entering the Port of New York. There are now approximately 125 active pilots in the New York and New Jersey associations which together form the United New York and New Jersey Sandy Hook Pilots' Association. In May 1970 the Sandy Hook Pilot School was established on Staten Island to formalize the training of new pilots.

## PILOT TRAINING PROGRAM

The courses listed below constitute the academic component of the Pilot Training Program. The objective of the program is to integrate the practical, technical, and theoretical aspects of navigation and nautical science to prepare the student to assume his role as pilot in large seagoing vessels entering, departing, and navigating within the Port of New York.

An individual must have completed 56 college credits before entering the pilot service. For 3½ years, before becoming a Registered State Pilot Apprentice, the student candidate receives training and practical experience under the supervision of licensed pilots and masters aboard two 1,000-ton pilot vessels stationed at sea off the entrance to New York Harbor. The student serves in the ship as a crew member during routine pilot service operations, participates in specified training cruises, and completes at least 50 passages in the harbor as an observer with senior pilots. The student attends classes in the Sandy Hook Pilot School during 6 days of each month and completes assignments while on his tour of duty aboard the pilot vessel. The student also attends the U.S. Maritime Administration Radar School and the Merchant Marine School of the Seamen's Church Institute to receive instruction in radar, loran, omega, the gyroscopic compass, and automatic steering systems. The last 8 weeks before taking the examination for the Federal merchant marine officer's license (Master of Coastwise Steam and Motor Vessels of Any Gross Tons) are spent in full-time study at the School to complete the fifth and final academic course.

After qualifying for the Federal license, the student begins 4 years as a registered apprentice. Upon completion, he is eligible to sit for the examination for the State license as Deputy Sandy Hook Pilot in the Sixth Grade. During the next 7 years, he may advance by successive steps until he receives the State license as Full Branch (First Grade) Pilot. The total period of training and experience, including 4 years as a registered apprentice, involves at least 14½ years.

Source of official student records: Educational Officer, Sandy Hook Pilot School, U.S. Coast Guard Annex, 1 Bay Street (Post Office Box 1694), Staten Island, New York 10301.

### Advanced Navigation and Nautical Science (05)

**Location:** Sandy Hook Pilot School, Staten Island, NY.

**Length:** 280 hours (8 weeks).

**Dates:** May 1970—Present.

**Objective:** To prepare the student for the U.S. Coast Guard examinations for a Federal merchant marine officer's license as Master of Coastwise Steam and Motor Vessels and First Class Pilot for New York Harbor.

**Instruction:** Rules of the road (international, inland, and pilot); aids to navigation and visibility of lights; compass (magnetism, deviation, and compensation); bearings, pilotage, and leeway; chart navigation; instruments and accessories; ocean winds, weather, and currents; seamanship, cargo, and ship sanitation; shiphandling; ship construction, stability, and changes in draft; signals (general, distress, and special); lifesaving apparatus and firefighting equipment; tankerman and oil pollution; U.S. Coast Guard rules and regulations and marine inspection laws; local climate, tides, currents, winds, ice, and fog. Approximately one-fourth of the course is devoted to chart construction and practical chart work. (Prerequisite: Terrestrial Navigation.)

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Navigation and Nautical Science (10/76).

### Basic Nautical Science (01)

**Location:** Sandy Hook Pilot School, Staten Island, NY.

**Length:** 273 hours (39 weeks).

**Dates:** May 1970—Present.

**Objective:** To instruct the student in basic nautical science and ship operations; to prepare the student for the U.S. Coast Guard examination for certification as able seaman and lifeboatman.

**Instruction:** Ship organization, station bills, routines, and duties of personnel; types of ships; ship nomenclature; small boat nomenclature, construction, handling, and equipment; cordage, canvas, and wire rope; blocks, tackles, masts, booms, and mechanical appliances; emergencies; safety precautions; ground tackle and winches; care of lifeboats and equipment; fire detection and extinguishers; emergency lifesaving appliances.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Nautical Science (10/76).

## Basic Navigation, Seamanship, and Safety (02)

**Location:** Sandy Hook Pilot School, Staten Island, NY.

**Length:** 273 hours (39 weeks).

**Dates:** May 1970—Present.

**Objective:** To instruct the student in seamanship, safety, and basic navigation; to prepare the student for the U.S. Coast Guard examination for a license as an operator of small motor vessels (100 gross tons or less).

**Instruction:** Basic navigation and rules of the road; seamanship; theory and practice of vessel operation and safety; emergency communications; first aid and lifesaving. (Prerequisite: Basic Nautical Science.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Nautical Science (10/76).

## Part 1: Intermediate Nautical Science and Rules of the Nautical Road (03)
## Part 2: Terrestrial Navigation (04)

**Location:** Sandy Hook Pilot School, Staten Island, NY.

**Length:** 624 hours (78 weeks); **Part 1:** 5 hours per week; **Part 2:** 3 hours per week.

**Dates:** May 1970—Present.

**Objective: Part 1:** To provide the student with the theoretical knowledge needed to become a competent ship's officer. **Part 2:** To provide the student with the theoretical knowledge needed to become a competent navigator and pilot.

**Instruction: Part 1:** Deck officer's responsibilities, duties, and daily routine; the deck log as an instrument of the ship's operational record; strength of materials calculations with regard to lifeboat handling equipment, ground tackle, and cargo handling equipment; principles of propulsion and steering of ships; shiphandling (ship control, docking and undocking, anchoring and mooring, towing, and salvage); techniques and methods of establishing communications at sea in accordance with the International Code of Signals; U.S. Coast Guard rules and regulations; marine inspection laws; lifesaving apparatus; firefighting equipment; related problems with shipboard applications; laws and rules for prevention of collision at sea and application of the rules to actual situations; pertinent U.S. court decisions. (Prerequisite: Basic Navigation, Seamanship, and Safety.) **Part 2:** Theory of chart projections; construction of mercator projection by mathematical means; the sailings; magnetism and the magnetic compass; ship's position finding by dead reckoning and piloting; navigation; theory and effects of tides and tidal currents; basic meteorology. (Prerequisite: Intermediate Nautical Science and Rules of the Nautical Road.)

**Credit recommendation:** In the upper division baccalaureate category, 8 semester hours in Navigation and Nautical Science (10/76).

## Ship Operation and Management Laboratory (06L)

**Location:** Sandy Hook Pilot School, Staten Island, NY.

**Length:** 156 weeks (3 years); 6 days, or approximately 72 hours, out of each 9-day period.

**Dates:** January 1978—Present.

**Objective:** To supplement formal classroom instruction with practical shipboard experience in order to promote an understanding of shipboard organization and operation.

**Instruction:** During each six days aboard ship, the student's time is spent in watchstanding, ship maintenance and repair, and practical learning experiences provided in the following areas: watchstanding underway at sea; drills and exercises in ship maneuvering; abandon ship; fire drills; rules of the road; deck seamanship; navigation (at least six structured real-life problems); meteorology; ship construction; marine engineering (deck); and communications. The student completes a workbook of exercises relating to the above areas.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Navigation and Nautical Science, and in the upper division baccalaureate category, 8 semester hours in Navigation and Nautical Science (11/77). NOTE: All three years of sea cruise training must be completed to receive credit.

## Terrestrial Navigation (04)

Refer to Intermediate Nautical Science and Rules of the Nautical Road (03).

# UNITED STATES PUBLIC HEALTH SERVICE HOSPITAL STATEN ISLAND, NEW YORK

## (Now known as BAYLEY SETON HOSPITAL)

Located at the waterfront on 25 acres of land in Staten Island, New York, the Bayley Seton Hospital provides, on a nonprofit basis, hospital facilities and services for the care and treatment of persons who are acutely ill. The hospital gives optimal patient care to all in need without regard to race, color, or creed. It is a teaching institution and trains interns, residents, nurses, physician assistants, and related health personnel through comprehensive medical training programs. The hospital also engages in clinical research.

## PHYSICIAN ASSISTANT TRAINING PROGRAM

The Physician Assistant Training Program was established in 1966. Its major purpose is to provide competent assistants to the primary care practitioner who can function effectively in a wide variety of practice settings. The overall goals and objectives of the Program are:

- To provide a well-rounded program of academic and clinical training which will enable the physician assistant to perform his/her tasks competently and efficiently as an extender to the primary care physician.
- To provide the student with the necessary knowledge, skills, and abilities to accurately and reliably perform the duties of the physician assistant.
- To develop in the student the technical capabilities, behavioral characteristics, and judgment necessary to understand mental and physical disease in both the ambulatory and hospitalized patient.
- To develop in the student the basic intellectual, ethical, and moral attitudes and principles that are essential for gaining and maintaining the trust of professional associates, the support of the community, and the confidence of the patient.

The Program is accredited by the Committee on Allied Health Education and Accreditation in cooperation with the Joint Review Committee on Educational Programs for the Physician Assistant. Accreditation is awarded for compliance with the Essentials of an Accredited Educational Program for the Assistant to the Primary Care Physician. The Program is also approved by the New York State Board for Medicine and is a member of the Association of Physician Assistant Programs. The Program Director is a member of The Council of Program Directors, New York State Physician Assistant Programs.

The duration of the Program is twenty-three calendar months. Upon successful completion, each student receives a Physician Assistant Certificate from the Bayley Seton Hospital. Those students enrolled in the Program through St. John's University also receive a baccalaureate degree from St. John's University. Graduates of the Program are registered as Physician Assistants by the New York State Education Department. Graduates are eligible to take the National Certifying Examination for Primary Care Physician Assistants which is sponsored by the National Commission of Certification of Physician Assistants and prepared by the National Board of Medical Examiners.

Source of official student records: Program Director, Physician Assistant Training Program, Bayley Seton Hospital, Bay Street and Vanderbilt Avenue, Staten Island, New York 10304.

### Anatomy and Physiology

**(Taught as separate courses prior to September 1976)**

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 135 hours (10 months).

**Dates:** September 1974 – Present.

**Objective:** To provide an elementary knowledge of the structures and functions of the human body as a background for studying medical and surgical conditions.

**Instruction:** The structure and function of the human body. Basic overview of integumentary, musculoskeletal, circulatory, endocrine, digestive, respiratory, excretory, nervous, and reproductive systems. No laboratory experience is included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Basic Science (Anatomy, Physiology) (12/77).

### 1. Anesthesia
### 2. Clinical Pharmacology
### 3. Dietetics

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 1. 5 hours (10 months).
2. 90 hours (10 months).
3. 12 hours (10 months).

**Dates:** September 1974—Present.

**Objective:** To provide an understanding of general and specific concepts of medical pharmacology and pharmacodynamics.

**Instruction:** **Course 1:** Definition, classification, and types of anesthesia; the mechanisms of local and topical anesthesia, and the rationale for their use; the stages of anesthesia. **Course 2:** Chemical compounds used to diagnose and treat human disease; the basic structures, mechanisms of action, interactions, outstanding adverse reactions, and uses of drugs in the human body. The organization of the course follows the systems framework: integumentary, musculoskeletal, head and neck, respiratory, cardiovascular, neurological, endocrine, gastrointestinal, and genitourinary. **Course 3:** Evaluation of patient's needs in reference to specific culture, psychological influences, physical condition, and ability to learn; elements of good nutrition; effect of poor nutrition on the body; description of proper diets indicated for all diet-influenced pathological conditions.

**Credit recommendation:** In the upper division baccalaureate category, 6 semester hours in Science (Clinical) (12/77).

## Cardiopulmonary Resuscitation

Refer to Medicine.

## Clinical Chemistry/Clinical Laboratory

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 38½ hours (10 months).

**Dates:** September 1974—Present.

**Objective:** To provide an understanding of the concepts of clinical laboratory experience.

**Instruction:** Interpretation and evaluation of normal and abnormal values of clinical chemistry determinations that are useful in formulating a diagnosis and in monitoring a patient's status. Demonstration of basic laboratory procedures, including CBC, urinalysis, and gram stain.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Science (Elective) (12/77).

## Clinical Pharmacology

Refer to Anesthesia.

## Clinical Practice

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 2,080 hours (52 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide students with supervised experiential training in patient care in a variety of medical specialities.

**Instruction:** Students are assigned to a series of physician preceptors on a one-to-one basis for a 52-week period, during which they rotate through medicine, surgery, pediatrics, and obstetrics/gynecology as well as a number of medical and surgical subspecialties (radiology, psychiatry, dermatology, family practice, orthopedics, and urology). Students participate in all rounds, conferences and seminars, and participate fully in the daily work of the service to which they are assigned. Students attend, and participate in, a twice-weekly clinical presentation supervised by the Medical Program Director; attend, and participate in, clinics and educational conferences throughout the Metropolitan area under the supervision of the physician preceptor; and are tested with an examination at the termination of each rotation.

**Credit recommendation:** In the upper division baccalaureate category, a maximum of 52 semester hours (based on 1 credit per 40-hour week) in Supervised Experiential Training (12/77).

## Dermatology

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 34 hours (10 months).

**Dates:** September 1974—Present.

**Objective:** To provide knowledge of the diagnosis and treatment of diseases of the skin.

**Instruction:** Nomenclature and description of dermatologic lesions; differentiation between cutaneous responses to systemic or local disease; differential diagnoses and principles of treatment. Use of audiovisual materials is emphasized to help recognition of dermatologic lesions.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Health and Medically Related Subjects (12/77).

## Dietetics

Refer to Anesthesia.

## Electrocardiography

Refer to Medicine.

## Health History and Physical Examination

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 91 hours (10 months); includes 40 hours of laboratory experience.

**Dates:** September 1974—Present.

**Objective:** To provide the knowledge and skills necessary to elicit a thorough history and conduct a competent physical examination.

**Instruction:** General theory of the health history and physical examination: their importance in the diagnosis of disease: the correct format and techniques used in taking medical histories and in performing physical examinations. Complete histories and physicals are performed under supervision on hospital patients.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Health and Medically Related Subjects (3 lecture, 1 laboratory) (12/77).

## Human Behavior in Family Practice

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 38 hours (10 months).

**Dates:** September 1977 – Present.

**Objective:** To sensitize students to the psychosociological needs of patients and their families.

**Instruction:** Common emotional and adjustment disorders; skills to deal effectively with such disorders; procedures for making appropriate referrals in complex cases. Role playing and audiovisual materials relating to clinical case examples are used. Students make a field trip to a nursing home.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Allied Behavioral Science (12/77).

## Medical – Surgical Techniques

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 85 hours (10 months); includes 43 hours of laboratory experience.

**Dates:** September 1974 – Present.

**Objective:** To provide knowledge and skills in performing basic medical and surgical techniques.

**Instruction:** Introduction to the health care team: functions of members; professional standards and ethics; medicolegal aspects; hospital safety; and health education. Development of the basic techniques of: vital signs; surgical asepsis and dressings; central venous pressure; medications and injections; application and removal of casts and splints; pre- and postoperative care; tracheotomy; electrocardiogram; rehabilitation; physical therapy; and nasogastric intubation.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Health and Medically Related Subjects (3 lecture, 1 laboratory) (12/77).

## Medicine

1. **Cardiopulmonary Resuscitation**
2. **Electrocardiography**
3. **Medicine**
4. **Respiratory Therapy**

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 1. 13 hours (10 months).
2. 9 hours (10 months).
3. 101 hours (10 months).
4. 9 hours (10 months).

**Dates:** September 1974 – Present.

**Objective:** To provide an understanding of the concepts of medicine and its subdivisions: cardiopulmonary resuscitation; electrocardiography; respiratory therapy.

**Instruction: Course 1:** Prudent living as a cause of healthy hearts; preventing unnecessary deaths from heart disease; advanced cardiopulmonary resuscitation. Students perform CPR on an appropriate manikin to meet the performance standards of the American Heart Association and the American Red Cross. **Course 2:** Introduction to the normal electrocardiogram; basic physiologic considerations and vector theory; characteristics of, and electrocardiographic patterns in, right and left ventricular hypertrophy; coronary disease; digitalis toxicity; hypothyroidism and resulting electrolyte imbalance. **Course 3:** Etiology, diagnosis, and therapy of pathological conditions of the following systems: musculoskeletal; respiratory; lymphatic; cardiovascular; neurological; endocrine; gastrointestinal; urological. **Course 4:** Review of the anatomy and physiology of the respiratory system; signs and symptoms of the need for respiratory assistance; management of airway problems and respiratory distress; suctioning; evaluation of blood gases.

**Credit recommendation:** In the upper division baccalaureate category, 8 semester hours in Health and Medically Related Subjects (12/77).

## Microbiology

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 38 hours (10 months).

**Dates:** September 1974 – Present.

**Objective:** To provide a survey of causative agents and clinical manifestations of specific diseases.

**Instruction:** Classification of bacteria, bacterial cytology, and microbial genetics. Description of organisms; the diseases they cause; their pathogenesis; appropriate diagnostic tests; therapy; epidemiology; control. Course does *not* include laboratory experience.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Science (12/77). NOTE: This course is *not* a substitute for a basic course in Microbiology.

## Obstetrics and Gynecology

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 20 hours (10 months).

**Dates:** September 1974—Present.

**Objective:** To provide knowledge of the normal and abnormal female reproduction system.

**Instruction:** Anatomy and physiology of the female reproductive tract; sexuality; family planning; fertility and infertility; placental development and the gravid uterus; fetal nutrition and growth; endocrine changes during pregnancy; normal and complicated pregnancies; antepartum care; labor and delivery; common gynecological disorders. Demonstration of procedures for pelvic examinations, including the use of manual techniques and gynecological instruments.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Health and Medically Related Subjects (12/77).

## Ophthalmology

Refer to Surgical Specialties.

## Oral Pathology

Refer to Surgical Specialties.

## Orthopedics

Refer to Surgical Specialties.

## Otolaryngology

Refer to Surgical Specialties.

## Pathology

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 39 hours (10 months).

**Dates:** September 1974—Present.

**Objective:** To provide an understanding of the pathogenesis of the disease process as it affects other parts of the body and the patient as a whole, and the pathology of specific diseases.

**Instruction:** Origin and progress of disease at the cellular level; etiology, pathogenesis, morphology, and clinical course of the most common pathological disorders. Lectures are supplemented by the use of audiovisual materials.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Science (Clinical) (12/77).

## Pediatrics

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 54 hours (10 months).

**Dates:** September 1974—Present.

**Objective:** To provide an understanding of the normal and abnormal development of infants and children, and the diagnosis and treatment of pediatric conditions.

**Instruction:** Care of the well baby and child; normal growth and development, and their assessment; pediatric cardiology; child abuse and neglect; genetics; metabolic and endocrine disorders; allergic reactions; communicable childhood diseases; pediatric emergencies; mental retardation; adolescence; disorders of the digestive, musculoskeletal, and nervous systems; diseases of the urinary and respiratory tracts; the taking of histories and performance of physical examinations.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Health (12/77).

## Psychiatry

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 22 hours (10 months).

**Dates:** September 1974—Present.

**Objective:** To provide an understanding of emotional and psychological disorders and elements of care in mental illness.

**Instruction:** Development of normal personalities; the range of personality disorders, including organic brain syndrome and neuroses and psychoses of children and adults; introduction to the psychiatric interview and the management of psychiatric disorders.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Health and Medically Related Subjects (12/77).

## Radiology

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 40 hours (10 months).

**Dates:** September 1974—Present.

**Objective:** To provide knowledge of elementary radiation theory and the use of diagnostic radiology in patient care.

**Instruction:** History, terminology, indications, and techniques of normal X-rays and special procedures; the recognition of deviations from the normal. Extensive use of audiovisual materials.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Health and Medically Related Subjects (12/77).

## Respiratory Therapy

Refer to Medicine.

## Surgery
## 1. Surgery
## 2. Surgical Procedures Laboratory

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 1. 55 hours (10 months).
2. 32 hours (1 week).

**Dates:** 1. September 1974—Present.
2. June 1975—Present.

**Objective:** To provide an understanding of, and skills in, basic surgical principles and procedures.

**Instruction: Course 1:** Surgical conditions of all systems of the body: their etiology, diagnosis, and treatment: trauma: suturing: infections: burns: plastic procedures: infusion: cut downs: soft tissue surgery: glandular and tumor surgery. **Course 2:** Open gloving: closed gloving: surgical scrub procedure: gowning: surgical asepsis: surgical preparation: one- and two-handed suture ties: instrument ties: suturing. Students rotate in groups of four through the Surgical Procedures Laboratory. They practice for three days on a canine cadaver: on the fourth day an anesthetized live canine model is used.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Health and Medically Related Subjects (3 lecture, 1 laboratory) (12/77).

## Surgical Procedures Laboratory

Refer to Surgery.

## Surgical Specialties
## 1. Ophthalmology
## 2. Oral Pathology
## 3. Orthopedics
## 4. Otolaryngology
## 5. Urology

**Location:** U.S. Public Health Service Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 1. 15 hours (10 months).
2. 11 hours (10 months).
3. 40 hours (10 months).
4. 9 hours (10 months).
5. 17 hours (10 months).

**Dates:** September 1974—Present.

**Objective:** To provide knowledge and management of the following common surgical specialties: ophthalmology: oral pathology: orthopedics: otolaryngology; urology.

**Instruction: Course 1:** Anatomy and physiology of the eye: routine history and ocular examination: disorders of the lacrimal apparatus: conditions of the eyelids and optic nerve: lesions of the conjunctiva and cornea: uveitis: cataracts: glaucoma: diseases of the retina: ocular emergencies. Laboratory exercises include demonstrations and practical experience in such matters as measuring visual acuity, refractory errors, visual fields, and ophthalmoscope. **Course 2:** Classification, significance, and management of oral infections: evaluation, causes, and corrective techniques of facial trauma: oral tumors, dental anesthesia and radiology, and caries. **Course 3:** General principles of orthopedics: descriptions of orthopedic problems. Emphasis on etiology, diagnosis, and treatment. **Course 4:** Study of disorders of the ear, nose, and throat: evaluation of the disorders: their diagnosis and treatment. **Course 5:** Common disorders of the genitourinary system: their etiology, diagnosis, and modalities of treatment.

**Credit recommendation:** In the upper division baccalaureate category, 6 semester hours in Health and Medically Related Subjects (12/77).

## Urology

Refer to Surgical Specialties.

## SCHOOL OF ANESTHESIA FOR NURSES

The School of Anesthesia for Nurses was established in 1939. Its major purpose is to provide competent nurse anesthetists for the smaller U.S. Public Health Service hospitals and Health Service facilities on Indian reservations throughout the United States. The overall objectives of the program are:

- to provide training in the principles and practice of anesthesia which will enable the graduate to perform the duties of a nurse anesthetist at a high level of competence;
- to prepare nurse anesthetists qualified to function independently as single-person anesthesia departments;
- to provide instruction in theory and practice to enable graduates to meet the professional standards set by the American Association of Nurse Anesthetists.

The nurse anesthetist training program consists of 24 months of training, during which students attend classroom lectures, administer general anesthetics and assist in management of patients under staff supervision, attend daily staff conferences and case presentations, and participate in periodic conferences with consultant anesthesiologists.

Source of official student records: Training Department, Bayley Seton Hospital, Bay Street and Vanderbilt Avenue, Staten Island, New York 10304.

## Anatomy, Physiology, and Pathology

**Location:** Bayley Seton Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 249 hours (2 years).

**Dates:** July 1969—November 1981.

**Objective:** To provide the student with advanced knowledge of the structure, function, and disease processes of the human body as applied to intensive health care.

**Instruction:** Correlated and integrated approach to anatomy, physiology, and pathology with emphasis on the functional aspects. Protoplasm and its properties; embryology; anatomical terms; cells; tissues; organs; systems (skeletal, muscular, nervous, respiratory, circulatory, digestive, endocrine, excretory, reticuloendothelial); effects of anesthesia on the body.

**Credit recommendation:** In the upper division baccalaureate category, 12 semester hours in Basic Science (Anatomy, Physiology, and Pathology) (6/75).

## Applied Practice

**Location:** Bayley Seton Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 1,000 hours (2 years).

**Dates:** July 1969—November 1981.

**Objective:** To provide appropriate clinical experience necessary for the student to be able to apply concepts, skills, and knowledge effectively in both anesthesia and intensive care practice.

**Instruction:** Students function as learning members of an anesthesiology department. Experience is provided in patient preparation, selection of appropriate anesthetics, administration of anesthetics, and follow-up during the operative procedure. Close supervision is provided to develop and evaluate the students' clinical skills. Students work with a minimum of 500-700 patients during the two-year program. Other hospitals are utilized to provide a diversity of experience.

**Credit recommendation:** In the upper division baccalaureate category, 24 semester hours in Clinical Laboratory (6/75).

## Chemistry and Physics

**Location:** Bayley Seton Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 67 hours (2 years).

**Dates:** July 1969—November 1981.

**Objective:** To provide an introductory course in chemistry and physics with special reference to their applications in anesthesia.

**Instruction:** Basic mathematics; weights and measures; atomic theory; molecular theory; formulas and radicals; electrolytic solution; acid-base theory; organic and inorganic chemistry as related to anesthesia; biochemistry; blood brain barrier; physics; gas laws; gas cylinders and regulators; anesthesia machine design; gases and vapors in solution; diffusion and osmosis; anesthesia apparatus; transport of oxygen and carbon dioxide in blood; blood gas analyzers; ventilators; cleaning vs. sterilization; hyperbaric medicine; electricity and anesthesia; fire and explosion hazards.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Science (Chemistry and Physics) (6/75).

## Fundamentals of Anesthesia

**Location:** Bayley Seton Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 219 hours (2 years).

**Dates:** July 1969—November 1981.

**Objective:** To provide an overview of the fundamental methods and procedures of anesthesia.

**Instruction:** History of the anesthesia profession; ethics and legal aspects of anesthesia; common medical problems; common laboratory tests; equipment; techniques; positions; indications for intubation, extubation, and respiratory assistance; asepsis and care of equipment; contaminated case procedures.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Fundamentals of Anesthesia (6/75).

## Pharmacology

**Location:** Bayley Seton Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 140 hours (2 years).

**Dates:** July 1969—November 1981.

**Objective:** To provide the student with an indepth understanding of the effects of the clinical usage of drugs on the various systems of the body.

**Instruction:** Definitions and terminology; reactions to drugs; autonomic nervous system; cardiovascular drugs; diuretics; antihistamines; narcotics and narcotic antagonists; sedatives and hypnotics; hormones; tranquilizers; drug-related problems; signs and stages of general anesthesia; general anesthetic agents; local anesthetics. The following aspects of each drug are presented: classification, chemical types, mechanism of action, therapeutic effect, side effects, indications, contraindications, toxic reaction, and interrelationship with the state of anesthesia.

**Credit recommendation:** In the graduate degree category, 9 semester hours in Pharmacology (6/75).

## Respiratory Care

**Location:** Bayley Seton Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 45 hours (25 weeks).

**Dates:** July 1969—November 1981.

**Objective:** To provide an introductory course in respiratory therapy.

**Instruction:** Administration of gases for the treatment of primary and secondary conditions affecting respiration; emergency resuscitation cardioversions; therapeutic use of aerosols; administration of inhalation therapy; use, maintenance, and repair of automatic ventilators.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Respiratory Therapy (6/75).

## Seminar

**Location:** Bayley Seton Hospital, Bay Street and Vanderbilt Avenue, Staten Island, NY.

**Length:** 69 hours (2 years).

**Dates:** June 1969—November 1981.

**Objective:** To provide the student with research findings and discussion of new ideas and techniques in the field of anesthesia.

**Instruction:** Three consulting anesthesiologists each meet with the students and hospital anesthesia staff once a month to present cases for discussion and to critique cases presented by the students. Considerable preparation and participation are required on the part of each student.

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Current Medical Problems Relating to Anesthesia (6/75).

370

# VASSAR BROTHERS HOSPITAL

Vassar Brothers Hospital is a voluntary, nonprofit hospital located in Poughkeepsie, New York. The 342-bed hospital, founded in 1887, provides a full range of medical services, including outpatient and emergency care. The hospital is staffed by over 1,250 employees, including 250 physicians and dentists.

The hospital's In-Service Education Department provides a variety of educational programs for both nursing and non-nursing employees. Programs for nursing staff include orientation, in-service, and continuing education sessions. Both nurses and lay employees may participate in programs on general safety, body mechanics, and cancer education.

Source of official student records: Director of In-Service Education, Vassar Brothers Hospital, Reade Place, Poughkeepsie, New York 12601.

## Coronary Care Course for Nurses

**Location:** Vassar Brothers Hospital, Poughkeepsie, NY.

**Length:** 138 hours (4 weeks); includes 24 hours of supervised clinical experience.

**Dates:** November 1974—June 1981.

**Objective:** To prepare the nursing practitioner to function effectively as a beginning member of the CCU team in a community hospital in providing skilled nursing care for the patient with acute cardiac problems.

**Instruction:** Anatomy and physiology of the cardiopulmonary system; arrhythmias; coronary heart disease and complications; medical/nursing treatment; nursing intervention; cardio-pulmonary resuscitation; use of electrical equipment, including safety factors; physical assessment skills; ECG skills; venapuncture skills. Lectures, discussions, films, slides, case studies, prepared handouts, guest lecturers, simulated laboratory sessions, workbook exercises, and clinical experiences are all incorporated into the course. Students are evaluated through written examinations (pretesting, intermediate testing, and posttesting) and performance in the clinical area.

**Credit recommendation:** In the lower divison baccalaureate/associate degree category, 2 semester hours in Intensive Care Nursing (9/78).

37-

# VERMONT CRIMINAL JUSTICE TRAINING COUNCIL

The Vermont Criminal Justice Training Council is responsible for improving the quality of law enforcement and citizen protection by maintaining a uniform standard of recruit and in-service training for all law enforcement officers in Vermont. These officers include members of the department of public safety, municipal police officers, constables, sheriffs and their deputies, corrections officers, prosecuting personnel, motor vehicle inspectors, state investigators of the Attorney General, and fish and game wardens who exercise law enforcement powers.

Effective July 1, 1979, the Vermont Criminal Justice Training Council assumed the administrative and operational responsibility for the Vermont Police Academy, which provides training facilities for all Vermont law enforcement officers. In addition to the Basic Recruit Program, the Academy conducts in-service programs for all law enforcement personnel. Vermont statutes mandate annual training for part- and full-time officers.

Source of official student records: Executive Director, Vermont Criminal Justice Training Council, Vermont Police Academy, Pittsford, Vermont 05763.

## BASIC RECRUIT PROGRAM

The courses listed below constitute a portion of the 10-week residential program, consisting of a minimum of 400 hours, which must be attended by all law enforcement officers in order to receive certification. Vermont State Police may offer their own basic training program, if they so elect, with the curriculum approved by the Council.

### Communication

**Location:** Vermont Police Academy, Pittsford, VT.

**Length:** 17 hours.

**Dates:** January 1979—Present.

**Objective:** To provide the student with basic interpersonal communication skills and specialized professional communication techniques.

**Instruction:** Behavioral aspects of interpersonal commmunication; report writing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Communication (9/80).

### Criminal Law

**Location:** Vermont Police Academy, Pittsford, VT.

**Length:** 41 hours.

**Dates:** January 1979—Present.

**Objective:** To provide the student with a practical working knowledge of criminal law.

**Instruction:** Vermont court system; laws of arrest; rules of evidence; search and seizure; Constitutional rights; police liability; juvenile law; fish and game law.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Criminal Justice (9/80).

### Emergency Services

**Location:** Vermont Police Academy, Pittsford, VT.

**Length:** 34 hours.

**Dates:** January 1979—Present.

**Objective:** To prepare the student to handle medical emergencies effectively.

**Instruction:** CPR; fracture care; environmental emergencies; medical emergencies; vehicle rescue; sudden infant death syndrome.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Health (9/80).

### Investigative Procedures

**Location:** Vermont Police Academy, Pittsford, VT.

**Length:** 77 hours.

**Dates:** January 1979—Present.

**Objective:** To provide the student with a practical working knowledge of general investigative procedures, with emphasis on accident investigation.

**Instruction:** Child abuse; substance abuse; role of the Vermont State Police crime lab; sudden and unexpected deaths as legally defined; accident investigation (reconstruction, preservation of evidence). Laboratory experience is provided through practical case exercises in which investigative techniques are applied directly to situations that actually occur in field assignments.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 5 semester hours in Police Science (9/80).

### Motor Vehicle Law

**Location:** Vermont Police Academy, Pittsford, VT.

**Length:** 34 hours.

**Dates:** January 1979 – Present.

**Objective:** To provide the student with a practical working knowledge of motor vehicle law.

**Instruction:** Vermont motor vehicle statutes; DUI Crimper certification.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Police Science (9/80).

### Police Patrol Tactics

**Location:** Vermont Police Academy, Pittsford, VT.

**Length:** 42 hours.

**Dates:** January 1979 – Present.

**Objective:** To acquaint the student with patrol tactics that are of assistance in the areas of crime prevention, crisis intervention, apprehension of criminals, and protection of the citizenry.

**Instruction:** Patrol concepts; operations; interviewing techniques; development of powers of observation; officer/violator contacts. Domestic crisis intervention and battered spouses. Crime prevention including physical security, neighborhood watch, block security, home surveys, and personal protection.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Police Science (9/80).

## IN-SERVICE COURSES

### Fundamentals of Supervision

**Location:** Vermont Police Academy, Pittsford, VT.

**Length:** 54 hours (2 weeks).

**Dates:** November 1980 – Present.

**Objective:** To prepare first-level supervisors to perform their supervisory functions.

**Instruction:** Introduction to key supervisory functions: planning; organizing; directing; coordinating; and controlling. Focus on key supervisory skills: communication; delegation; motivation; leadership; performance appraisal; decision making; problem solving; and time management. Course format includes lecture, discussion, role play activities, and case study analyses.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Personnel Supervision (2/81).

# WASHINGTON PUBLIC POWER SUPPLY SYSTEM

The Washington Public Power Supply System is a consortium of 19 public utility districts and four municipal electric systems in Washington State. The Supply System is responsible for the construction and subsequent operation of electric power generating plants. It does not have any significant transmission or distribution functions. As of mid-1981 it operates one hydro-electric plant and one large turbine generator plant supplied with steam purchased from an outside source. It has five nuclear power units under construction. The WNP-2 and WNP-1/4 units are located on the Department of Energy Hanford Reservation about 10 miles north of the headquarter facility in Richland, Washington. The WNP-3/5 units are located near Satsop, Washington, about halfway between Olympia and Aberdeen. There are a total of 115 organizations from seven states participating with the Supply System in this effort. These include 52 cooperatives, 32 municipalities, 26 public utility districts, and 5 investor-owned utilities. The Supply System has 2,400 employees.

The Supply System makes available an expanding variety of educational offerings to its employees. To date, the greatest attention has been focused on preparing personnel to safely and effectively operate, test, and maintain the nuclear units and obtain the required licenses from the Nuclear Regulatory Commission. Particular emphasis is being placed on development of a program to meet the educational needs highlighted by the Three-Mile Island accident. The overall education and training function is split among several different organizations. The Employee Training and Development staff presents courses to enhance employee individual and organizational productivity in areas such as supervisory and management training, human relations consulting, and organizational development. Technological education and training is developed and provided by or through a central Power Generation Training Department and the individual plant training staffs. In-house capabilities are supplemented by the use of outside educational institutions and training organizations.

Source of official student records: Supervisor, Employee Training and Development, Washington Public Power Supply System, 3000 George Washington Way, Richland, Washington 99352.

## Applied Fluid Mechanics

**Location:** Washington Public Power Supply System facilities at the Richland, WA headquarters; nuclear plant sites at Hanford and Satsop, WA.

**Length:** 60 hours (6 weeks).

**Dates:** January 1981 – Present.

**Objective:** To provide the student with an understanding of the fundamentals of fluid mechanics; to develop the student's ability to apply these fundamentals to hydraulic considerations encountered in the operation of light water reactors.

**Instruction:** Fluid properties; forces on submerged plane areas; flow of fluids; general energy equation; energy losses in fluid systems; series and parallel pipe systems; flow in fluid systems; pump selection; forces in fluid systems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Engineering; or in the upper division baccalaureate category, 3 semester hours in Engineering Technology (7/81).

## Deformation and Fracture Mechanics

**Location:** Washington Public Power Supply System facilities at the Richland, WA headquarters; nuclear plant sites at Hanford and Satsop, WA.

**Length:** 40 hours (4 weeks).

**Dates:** August 1980 – Present.

**Objective:** To provide the student with an understanding of deformation and fracture behavior of structural materials; to provide the student with an understanding of continuum, microstructural, and atomistic fracture theories and their interaction, neutron embrittlement of reactor systems, and linear-elastic fracture mechanics techniques.

**Instruction:** Stress and strain concepts and generalized stress-strain relationships for elastic bodies; dislocation theory and deformation twinning concepts; atomistic plastic deformation mechanisms and macroscopic structural properties; high temperature creep and stress rupture behavior of engineering alloys; fracture mechanics concepts, including brittle fracture, neutron irradiation damage, crack growth, and fatigue of metals; description of metals testing. No laboratory experience is included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Engineering; or in the upper division baccalaureate category, 2 semester hours in Engineering Technology (7/81).

## Effective Presentation Skills

**Location:** Washington Public Power Supply System facilities at the Richland, WA headquarters; nuclear plant sites at Hanford and Satsop, WA.

**Length:** 35 hours (2 weeks).

**Dates:** July 1981 – Present.

**Objective:** To provide the student with a working knowledge of effective oral presentation techniques and the opportunity to apply these techniques while developing an individual speaking style.

**Instruction:** Staging the audience; winning the audience's approval; understanding audience feedback; motivating the audience; body language; modes of presentation; controlling audiences with personal authority; using emotional responses with hostile audiences; using audience creativity to enhance presentations; preparing lesson plans; visual aids. Videotape replay is used to critique and polish participant skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Communications (7/81).

## Electrical Circuit Theory and Applications

**Location:** Washington Public Power Supply System facilities at the Richland, WA headquarters; nuclear plant sites at Hanford and Satsop, WA.

**Length:** 90 hours (8 weeks).

**Dates:** May 1981 – Present.

**Objective:** To provide the student with a basic knowledge of electrical circuits and machines, with emphasis on applications to light water reactor plants.

**Instruction:** Ohm's and Kirchoff's laws; network reduction and theorems; transients in simple circuits; complex numbers; alternating current circuits and networks; electronic amplifiers; digital logic circuits; magnetic devices; transformers and three-phase connections; DC, synchronous, and induction machines; automatic control systems; reactor instrumentation.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Engineering; or in the upper division baccalaureate category, 5 semester hours in Engineering Technology (7/81).

## Materials Science

**Location:** Washington Public Power Supply System facilities at the Richland, WA headquarters; nuclear plant sites at Hanford and Satsop, WA.

**Length:** 50 hours (5 weeks).

**Dates:** July 1980 – Present.

**Objective:** To provide the student with the principles relating properties and behavior of different classes of materials to crystal structure, microstructure, chemistry, and environment; to develop in the student the capability to apply these principles to phase transformations and kinetics, heat treatment, mechanical properties, and practical systems.

**Instruction:** Electronic structure, atom arrangements, dislocations, and grain structures; specific alloy systems and nonequilibrium conditions; phase transformations and kinetics, including diffusion and corrosion; principles and practical aspects of heat treatment; mechanical properties, including elastic and plastic deformation, stress-strain curves, true stress and true strain, mechanical testing, strengthening mechanisms, yielding, creep, fracture, and recovery; practical systems, including high strength steels, stainless steels, ziracaloy, aluminum alloys, cast irons, brasses, bronzes, actinides, and high temperature alloys; materials in light water reactor nuclear systems and radiation effects.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Engineering; or in the upper division baccalaureate category, 3 semester hours in Engineering Technology (7/81).

## Research Reactor Training

**Location:** Washington State University, Pullman, WA; Westinghouse Hanford Neutron Radiography Facility, Richland, WA.

**Length:** 64 hours (2 weeks).

**Dates:** July 1978 – Present.

**Objective:** To reinforce for the student the concepts of nuclear reactor theory, and to provide prospective nuclear power plant operators with practical experience through their observing and operating a TRIGA reactor.

**Instruction:** TRIGA fundamentals, instrumentation, safety limits, and review of physics concepts; facility introduction; reactor control manipulations; reactivity and control rod calibration; source effects and subcritical multiplication.

**Credit recommendation:** In the upper division baccalaureate category, 1 semester hour in Engineering Technology (7/81).

## Thermodynamics I: Fundamentals

**Location:** Washington Public Power Supply System facilities at the Richland, WA headquarters; nuclear plant sites at Hanford and Satsop, WA.

**Length:** 50 hours (5 weeks).

**Dates:** March 1981 – Present.

**Objective:** To provide the student with an understanding of thermodynamic fundamentals, terminology, basic equations, and methods of application to systems and processes.

**Instruction:** Basic concepts; the first law of thermodynamics; general nonflow processes; characteristics of gases; properties and characteristic behavior of steam; elementary steady-flow processes; air compression; cycles, available energy, and the second law of thermodynamics; power cycles; refrigeration cycles; nozzles and steam turbines; combustion; nuclear heat.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Engineering; or in the upper division baccalaureate category, 3 semester hours in Engineering Technology (7/81).

## Thermodynamics II: Heat Transfer

**Location:** Washington Public Power Supply System facilities at the Richland, WA headquarters; nuclear plant sites at Hanford and Satsop, WA.

**Length:** 40 hours (4 weeks).

**Dates:** June 1981 – Present.

**Objective:** To provide the student with an understanding of basic heat transfer processes; to relate the student's basic knowledge of heat transfer to thermodynamic systems, particularly light water reactors under operational and accident conditions.

**Instruction:** Introduction to heat transfer; steady state and transient heat conduction; forced and free convection; boiling and condensation heat transfer; heat exchanger design; thermal radiation; thermal stress; application to light water reactors.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Engineering; or in the upper division baccalaureate category, 3 semester hours in Engineering Technology (7/81).

## Washington Nuclear Project 2 Boiling Water Reactor Systems

**Location:** Washington Nuclear Project 2, Richland, WA.

**Length:** 200 hours (10 weeks).

**Dates:** October 1976 – Present.

**Objective:** To provide the student with a detailed understanding of the various WNP-2 BWR systems and subsystems and their interrelations.

**Instruction:** Reactor vessel and internals; core and fuel design; reactor vessel instrumentation; control rod blade and drive mechanism; control rod drive hydraulic system; reactor manual control system; recirculation system; recirculation flow control system; reactor water cleanup system; main steam system; source range monitoring system; intermediate range monitor; local power range monitor; average power range monitor; traversing in-core probe system; rod block monitor system; rod worth minimizer; rod sequence control system; reactor protection system; digital electrohydraulic control system; feedwater/level control system; A. C. power distribution; offgas system-low temperature; liquid waste system; solid waste processing; process effluent radiation monitoring system; area radiation monitoring system; Mark II containment; secondary containment; fuel pool cooling and cleanup system; standby liquid control; reactor core isolation cooling system; emergency core cooling system; high pressure core spray system; automatic depressurization system; residual heat removal system; hot standby operation; low pressure core spray system; ECCS integrated operation; process computer; BWR materials; BWR applied chemistry; fuel handling operations; thermal and hydraulic design.

**Credit recommendation:** In the upper division baccalaureate category, 4 semester hours in Engineering Technology (7/81).

# WESTERN ELECTRIC COMPANY, INCORPORATED

The Western Electric Company, Incorporated, which employs 158,000 persons, is part of the nationwide Bell System. The Company manufactures and supplies communication equipment for the Bell System.

The Bell Sales Division includes a Regional Center and a Material Management Center in each of the seven regions in the country. Nationwide, there are 43 distribution and service centers and 29 installation offices.

The Bell Sales Division has developed courses in many different subject areas to provide employees with an opportunity to receive appropriate training at various intervals in their careers. Courses focus on developing the technical, administrative, and managerial skills that are most relevant to the job being performed.

## BELL SYSTEM TRAINING CENTER

Western Electric's Bell System Training Center located in Dublin, Ohio provides national hands-on training to Western Electric and Telephone Operating Company employees who engineer, install, test, maintain, and repair the switching, transmission, and Private Branch Exchange (PBX) equipment used in the Bell System Telecommunications Network. Employees are released from other job responsibilities to attend the courses.

Source of official student records for Western Electric employees: The student's regional headquarters personnel office. Source of official student records for Bell System Operating Company employees: The student's company personnel office.

### 1. No. 1 ESS System Verification Testing Theory (539)
### 2. No. 1 Electronic Switching Systems (ESS) Training (540)

**Location:** 1. Western Electric regional locations; Atlanta, GA; Aurora, CO; Dallas, TX; King of Prussia, PA; Newark, NJ; Rolling Meadows, IL; St. Louis, MO; Sunnyvale, CA.
2. Bell System Training Center, Dublin, OH.

**Length:** 1. 160 hours (4 weeks).
2. 200 hours (5 weeks).

**Dates:** 1. December 1975—June 1981.
2. August 1975—June 1981.

**Objective:** To provide the student with the analytical skills and knowledge required to perform the installation of the Western Electric No. 1 Electronic Switching System (ESS) and perform all the diagnostic and troubleshooting tasks necessary to make the system fully operational.

**Instruction:** The use of generic system documents; utilization of the office parameter data assembly to identify failures involving parameters; utilization of the translation data assembly and teletype input/output messages to identify call progression failures; initiation of audit tests, analysis of audit printouts, diagnositic test results, maintenance interrupt printouts, and network failure printouts. Handling of recent change message printouts, call processing parameter and translation troubles, and interrupt, data validation, and audit error message printouts; isolation and location of trunk faults; analysis and troubleshooting of hardware troubles for the entire system. The course is equally divided between lecture/discussion and practical application of the material presented. (Prerequisite: No. 1 ESS Complex Hardware Testing, CHT-1.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Computer Technology (3 lecture, 5 laboratory) (10/77). NOTE: Courses 1 and 2 must both be completed to receive credit.

### 1. No. 2 ESS Peripheral Units (508C)
### 2. No. 2B ESS Processor (509CB)
### 3. No. 2B Electronic Switching System (ESS) (537B)

**Location:** 1. and 2. Western Electric regional locations; Atlanta, GA; Aurora, CO; Dallas, TX; King of Prussia, PA; Newark, NJ; Rolling Meadows, IL; St. Louis, MO; Sunnyvale, CA.
3. Bell System Training Center, Dublin, OH.

**Length:** 1. **Version 1:** 60 hours (1½ weeks); trainee-paced programmed instruction.
**Version 2:** 68 hours (1½ weeks); trainee-paced programmed instruction.
2. 160 hours (4 weeks); trainee-paced programmed instruction.
3. 200 hours (5 weeks).

**Dates:** 1. **Version 1:** June 1974—September 1978.
**Version 2:** September 1978—June 1981.

2. September 1976—June 1981.
3. September 1976—June 1981.

**Objective:** To provide the student with an understanding of the basics of digital electronics and computer technology, and to apply these principles to the detailed study of the Western Electric No. 2B Electronic Switching System (ESS).

**Instruction:** No. 2B ESS terminology; network path selection and failures; trunk test panel operation; troubleshooting trunks, junctors, and service circuits. Processor terminology; program languages; timing and control; memory; controllers; processor procedures and tests; I/O circuits; diagnostic programs. Detailed study of No. 2B ESS including control Unit tests, peripheral unit tests, call processing maintenance, system recovery, and operational tests. The course is equally divided between lecture/discussion and the practical application of the material presented. (Prerequisites: Basic ESS Installation Skills 506, Introduction to ESS 507, and ESS Peripheral Units 508.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Digital Electronics (2 lecture, 1 laboratory) and 7 semester hours in Computer Technology (3 lecture, 4 laboratory) (10/77). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### 1. Remreed TLN and LLN (508R)
### 2. No. 1 ESS Central Processor Testing and Program (509B)
### 3. No. 1 ESS Programming and Circuitry (534)
### 4. No. 1 ESS Complex Hardware Testing (CHT-1)

**Location:** 1, 2, and 3. Western Electric regional locations: Atlanta, GA; Aurora, CO; Dallas, TX; King of Prussia, PA; Newark, NJ; Rolling Meadows, IL; St. Louis, MO; Sunnyvale, CA.
4. Bell System Training Center, Dublin, OH.

**Length:** 1. 24 hours (3 days); programmed instruction.
2. 160 hours (4 weeks); 120 hours trainee-paced programmed instruction and 40 hours of laboratory work.
3. 160 hours (4 weeks).
4. 172 hours (4 weeks).

**Dates:** 1. June 1976—June 1981.
2. November 1972—June 1981.
3. July 1968—June 1981.
4. November 1972—June 1981.

**Objective:** To provide the student with an understanding of the basics of digital electronics and computer technology, and to apply these principles to the detailed study of the Western Electric No. 1 Electronic Switching System (ESS).

**Instruction:** No. 1 ESS terminology; Remreed Trunk Line and Line Link Networks (TLN and LLN). Preliminary testing of the central processor and single system diagnostic testing; program store; call store; central control; program language; program documentation. Circuit descriptions and schematic drawings for the central control and signal processor circuitry; single system diagnostic testing and initialization test programs; trouble-locating procedures. Detailed study of the No. 1 ESS, including control unit tests, peripheral unit tests, call processing maintenance, system recovery, and operational tests. The course is equally divided between lecture/discussion and the practical application of the material presented. (Prerequisites: Basic ESS Installation Skills 506, Introduction to ESS 507, and ESS Peripheral Units 508.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Digital Electronics (3 lecture, 1 laboratory) and 7 semester hours in Computer Technology (3 lecture, 4 laboratory) (10/77). NOTE: Courses 1, 2, 3, and 4 must all be completed to receive credit.

# XEROX CORPORATION

Xerox Corporation is a multinational organization with interest in copiers/duplicators, information-processing, reprographics, education, publishing, aerospace, and medical diagnostics. Xerox has extended its interests throughout the world to over 113 countries.

A variety of residential training courses is offered to Xerox employees from the United States, Canada, and other countries at the International Center for Training and Management Development in Leesburg, Virginia, in Rochester, New York and additional training facilities. Each group or division within the corporation conducts training programs for its employees.

## BUSINESS SYSTEMS GROUP

The Xerox Business Systems Group (BSG) is responsible for the marketing and servicing of all copier and duplicator products within the United States.

## NATIONAL SERVICE/DISTRIBUTION-CONTINUING EDUCATION PROGRAM

The BSG National Service/Distribution Continuing Education Program provides individualized training and development to headquarters and field staff within the service area (although these courses are available on a limited basis to other employees). CEP Program offerings include computers/logic, electricity/electronics, management, communications, and metrication. Each course is designed to assist voluntary career planning needs for job fulfillment, technology upgrade, promotion, and career path change.

Source of official student records: Continuing Education Program Administrator, Information Systems Group, Xerox Corporation, Post Office Box 9629, Rochester, New York 14604.

### Basic Electricity (E120)

**Location:** Self-paced programmed instruction administered through the Continuing Education Program of the Information Systems Group, Xerox Corportion, Rochester, NY.

**Length:** Independent study.

**Dates:** December 1973—Present.

**Objective:** To enable the student to develop the techniques used to analyze basic DC and AC circuits.

**Instruction:** Static electricity; series and parallel circuits; voltage dividers; electromagnetic induction; generators; electrical meters; voltage, current, and power relations in AC circuits; inductance; capacitance; tranformers; RL/RC/RLC circuits; resonance. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electricity/Electronics (4/80).

### 1. Basic Transistor Circuits (E140)
### 2. Introduction to Transistors (E130)
### 3. Understanding Solid State Electronics (E110)

**Location:** Self-paced programmed instruction administered through the Continuing Education Program of the Information Systems Group, Xerox Corporation, Rochester, NY.

**Length:** Independent study.

**Dates:** 1. September 1975—Present.
2. September 1975—Present.
3. December 1973—Present.

**Objective:** To provide the student with an introduction to solid state terminology, devices, and circuits.

**Instruction:** Diodes; transistors; thyristors; linear and digital integrated circuits; optoelectronics; transistor amplifier circuits; multivibrators. Laboratory work is *not* included. (Course 1 prerequisite: Introduction to Transistors E130.)

**Credit recommendation:** In the vocational certificate category, 4 semester hours in Electricity/Electronics; or in the lower division baccalaureate/associate degree category, 2 semester hours in Electricity/Electronics (4/80). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

### 1. Boolean Algebra (C200)
### 2. Introduction to Logic Design Symbols (C110)

**Location:** Self-paced programmed instruction adminstered through the Continuing Education Program of the Information Systems Group, Xerox Corporation, Rochester, NY.

**Length:** Independent study.

**Dates:** February 1973—Present.

**Objective: Course 1:** To provide the student with an understanding of the principles of Boolean logic and simplification. **Course 2:** To acquaint the student with the structure and operation of logic circuitry.

**Instruction: Course 1:** Binary numbers; conversion of binary numbers to decimal and octal numbers; Boolean expressions and symbols; NOT function; AND/OR and exclusive OR symbols; truth tables; circuits; Boolean algebra theorems; minimization techniques using Veitch diagrams. **Course 2:** AND/OR gates; NAND/NOR gates; RS/JK flip-flops; special circuits (oscillator, single-shot, Schmitt trigger, and time delay).

**Credit recommendation: Courses 1 and 2 together:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Computer Technology, Electrical Engineering, or Electrical Technology (4/80). **Course 1 alone:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Computer Technology, Electrical Engineering, or Electrical Technology (4/80). NOTE: Credit is *not* recommended for Course 2 alone. Credit is *not* recommended for either course if a student has already received credit for Fundamentals of Digital Computers I C210.

## 1. Face-to-Face Communication I (P140)
## 2. Face-to-Face Communication II (P150)
## 3. Strategies for Effective Listening (P102)
### (Formerly Effective Listening [P110])
## (Interpersonal Communications Workshop)

**Location:** Self-paced programmed instruction adminstered through the Continuing Education Program of the Information Systems Group, Xerox Corporation, Rochester, NY.

**Length:** Independent study.

**Dates:** 1. September 1975–Present.
2. September 1975–Present.
3. December 1973–Present.

**Objective:** To enable the student to develop effective communication skills.

**Instruction:** Importance of effective listening; methods of active and interactive listening; listening strategies; understanding communication methods and the effect of aim, bias, and climate; use of questioning skills and probing techniques. Audiotapes are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Communications (4/80). NOTE: Courses 1, 2, and 3 must all be completed to receive credit.

## Fundamentals of Digital Computers I (C210)

**Location:** Self-paced programmed instruction adminstered through the Continuing Education Program of the Information Systems Group, Xerox Corporation, Rochester, NY.

**Length:** Independent study.

**Dates:** February 1973–Present.

**Objective:** To provide the student with a knowledge of numbering systems, binary arithmethic, switching logic registers, encoders, flip-flops, and selection circuits.

**Instruction:** Binary arithmetic; numbering systems; coding; Boolean logic and circuit simplification; AND, OR, NOT, NAND, and NOR gates; flip-flops; registers; counters; adders; encoders and decoders. (Prerequisite: AAS degree in Electrical Technology or equivalent experience.)

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 3 semester hours in Computer Technology or Electrical Technology (4/80). NOTE: Credit is *not* recommended for the course if a student has already received credit for either Boolean Algebra C200 or the combination of Introduction to Logic Design Symbols C110 and Boolean Algebra C200.

## 1. Human Relations (P130)
## 2. Personnel Administration (P120)
## 3. Principles of Management (P110)
## (Principles of Management and Supervision)

**Location:** Self-paced programmed instruction adminstered through the Continuing Education Program of the Information Systems Group, Xerox Corporation, Rochester, NY.

**Length:** Independent study.

**Dates:** 1. September 1975–Present.
2. December 1973–Present.
3. December 1973–Present.

**Objective:** To enable the student to identify and describe basic principles and functions of management, relate management principles to problems within an organization, and specify approaches a supervisor can take in dealing with personnel-related situations.

**Instruction:** Management principles; functions of management; styles of management and supervision; organizational structure. Basic principles are applied to specific problems faced by supervisors. Audiotapes are used.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration or Management (4/80). NOTE: Course 1, 2, and 3 must all be completed to receive credit.

### Introduction to Logic Design Symbols (C110)

Refer to Boolean Algebra (C200).

### Introduction to Transistors (E130)

Refer to Basic Transistor Circuits (E140).

### 1. Microcomputer I (C230)
### 2. Microcomputer II (C240)

**Location:** Self-paced programmed instruction adminstered through the Continuing Education Program of the Information Systems Group, Xerox Corporation, Rochester, NY.

**Length:** Independent study.

**Dates:** September 1977—Present.

**Objective:** To provde the student with a knowledge of the architecture, instructions, and applications of microcomputers.

**Instruction:** Binary arithmetic; microcomputer architecture and instructions; 4-bit microprocessors and support (4004, 4040); 8-bit microprocessors and support (8008, 8080); assembers and compilers. (Course 2 prerequisite: Microcomputer I C230.)

**Credit recommendation:** In the upper division baccalaureate category, 3 semester hours in Computer Technology (4/80). NOTE: Courses 1 and 2 must both be completed to receive credit.

### Personnel Administration (P120)

Refer to Human Relations (P130).

### Principles of Management (P110)

Refer to Human Relations (P130).

### Strategies for Effective Listening (P102)

Refer to Face-to-Face Communication I (P140).

### Technical Electricity and Electronics (E200)

**Location:** Self-paced programmed instruction adminstered through the Continuing Education Program of the Information Systems Group, Xerox Corporation, Rochester, NY.

**Length:** Independent study.

**Dates:** September 1979—Present.

**Objective:** To provide the student with a survey of the principles of DC and AC electricity, electronic devices, communication circuits, and simple systems.

**Instruction:** Testing and measurement procedures; troubleshooting; circuit assembly and wiring techniques. Laboratory work is *not* included.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Electricity/Electronics (4/80). NOTE: This is a survey course in electricity/electronics, appropriate for non-electrical technology majors only.

### Understanding Solid State Electronics (E110)

Refer to Basic Transistor Circuits (E140).

### Using the Metric System (P170)

**Location:** Self-paced programmed instruction administered through the Continuing Education Program of the Information Systems Group, Xerox Corporation, Rochester, NY.

**Length:** Independent study.

**Dates:** September 1978—Present.

**Objective:** To provide the student with a working knowledge of the international metric system.

**Instruction:** Identification of basic metric measurements related to distance, area, volume, weight, mass, temperature, time, and rate. Conversion of measurements from the customary United States system to the metric system. Recognition and application of the metric system to practical work and life situations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Electrical, Industrial, or Mechanical Technology (4/80).

## PERSONNEL MANAGEMENT TRAINING

The BSG Personnel Management Training group provides training and development to meet the company's management manpower needs from the first level through middle management. Courses follow a progression which builds on previous courses and work experience. Some courses are general in nature and are taken by all managers at a particular level; others have a basic core of material, but are focused differently depending on an individual's area of management.

Source of official student records: Headquarters Management Training Manager, Business Systems Group, Xerox Corporation, Xerox Square 836, Rochester, New York 14644.

### Field Executive Development Program (FEDP)

**Location:** International Center for Taining and Management Development, Leesburg, VA.

**Length:** 82 hours (2 weeks).

**Dates:** January 1973—October 1980.

**Objective:** To provide the technical and managerial knowledge necessary to run a branch as a general manager.

**Instruction:** Case analyses in the following areas: management selection and assessment; affirmative action; managing the branch service and administrative functions; planning: setting priorities and managing multiple objectives; establishing and using management information systems; branch financial management. (Prerequisite: Pre-Field Executive Development Program.)

**Credit recommendation:** In the graduate degree category, 3 semester hours in Case Studies in Bahavioral Science or Management (7/77).

## Headquarters New Manager Workshop

Refer to New Manager Workshop.

## Logistics and Distribution Manager Workshop

Refer to New Manager Workshop.

## Management Action Workshop

**Location:** International Center for Training and Management Development, Leesburg, VA; Management Education Center, Rochester, NY; Western Region Headquarters, Santa Ana, CA.

**Length:** 40 hours (1 week).

**Dates:** January 197[illegible]—Present.

**Objective:** To increase the participants' awareness of a wide range of behavioral science approaches to increase leadership effectiveness and to provide participants the opportunity to examine their own leadership styles in light of these approaches.

**Instruction:** Participants explore and analyze the effects of their managerial actions and approaches by studying current behavioral concepts and by looking at previous on-the-job behavior, clarifying how they are likely to behave in certain situations, and examining their in-class behavior under a variety of simulated conditions. (Prerequisite: New Manager Workshops.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Management or Psychology; or in the graduate degree category, 1 semester hour in Management or Psychology (7/77).

## Management Studies

**Location:** Management Education Center, Rochester, NY; branch locations throughout the United States.

**Length:** 48 hours (11 weeks).

**Dates:** January 1974—Present.

**Objective:** To provide the management candidate with a working knowledge of basic managerial skills and a theoretical background in motivation, management styles, communication, and human interaction.

**Instruction:** Overview of the management process; planning and goal setting; utilizing the organization; implementing and monitoring; problem solving; instrumented feedback; development action planning. In addition to the use of lecture/discussion and audiovisual presentations throughout the course, a full day is devoted to small group presentations on motivations, management style, and communication.

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavior Aspects of Management (7/77).

## New Administrative Manager Workshop

Refer to New Manager Workshop.

## New Control Manager Workshop

Refer to New Manager Workshop.

## New Manager Workshop

1. **Headquarters New Manager Workshop**
2. **Logistics and Distribution Manager Workshop**
3. **New Control Manager Workshop**
   **(Formerly New Administrative Manager Workshop)**
4. **New Sales Manager Workshop, Phases I and II**
   **(Formerly New Sales Manager Workshop and Pre-Sales Manager Workshop)**
5. **New Service Manager Workshop, Phases I and II**

**Location:** Management Education Center, Rochester, NY.

**Length:** 1. 40 hours (1 week).
2. 40 hours (1 week).
3. 80 hours (2 weeks).
4. 80 hours (2 weeks); one-week session (Phase I) followed by one-week session (Phase II) four months later.
5. 120 hours (3 weeks); two-week session (Phase I) followed by one-week session (Phase II) four months later.

**Dates:** 1. June 1976—Present.
2. June 1976—Present.
3. April 1976—Present.
4. June 1976—Present.
5. January 1976—January 1979.

**Objective:** To enable the new manager to define his/her people-management task, to develop skills to effectively work with employees, and to plan a personal management system to be implemented on the job.

**Instruction: Each course:** Time planning and setting priorities; situational leadership; defining objectives, criteria, and standards; assessing subordinates; tracking and monitoring; influencing and motivation skills; managing critical interactions; communicating affirmative action; total employee development process; transition to management; the management process;

establishing and communicating performance expectations; management information system; providing feedback on performance. **Course 3 and Course 5:** Expand on the following topics: progressive discipline; subordinate development; career guidance. **Course 4:** Also includes: employee selection; affirmative action; management discussion skills; time utilization and establishing priorities; management information system; personnel policies; compensation; personal planning. The course includes the use of lecture/discussion, individual role-play exercises, and group presentation. (Prerequisite: Management Studies.)

**Credit recommendation: Course 1 or Course 2:** In the upper divison baccalaureate category, 2 semester hours in Personnel Management; or in the graduate degree category, 1 semester hour in Personnel Management (7/77). **Course 3:** In the upper divison baccalaureate category, 3 semester hours in Personnel Management; or in the graduate degree category, 2 semester hours in Personnel Management (7/77). **Course 4:** In the upper division baccalaureate category, 1 semester hour in Marketing Management and 2 semester hours in Personnel Management; or in the graduate degree category 1 semester hour in Marketing Management and 1 semester hour in Personnel Management (7/77). **Course 5:** In the upper division baccalaureate category, 4 semester hours in Personnel Management; or in the graduate degree category, 3 semester hours in Personnel Management (7/77).

## New Sales Manger Workshop, Phases I and II

Refer to New Manager Workshop.

## New Service Manager Workshop, Phases I and II

Refer to New Manager Workshop.

## Pre-Sales Manager Workshop

Refer to New Manager Workshop.

## Region Administrative Workshop

**Location:** International Center for Training and Management Development, Leesburg, VA.

**Length:** 40 hours (1 week).

**Dates:** August 1976 – Present.

**Objective:** To prepare the management candidate with the basic management knowledge and skills necessary to assume a first-line administrative management position.

**Instruction:** Employee selection; affirmative action; management discussion skills; interpersonal skills for dealing with conflict, anger, and change; self-assertion; transactional analysis. The course includes the use of lecture/discussion, individual role-play exercises, and group presentations. (Prerequisite: Management Studies.)

**Credit recommendation:** In the upper division baccalaureate category, 2 semester hours in Behavioral Aspects of Management or Industrial Psychology; or in the graduate degree category, 1 semester hour in Behavioral Aspects of Management or Industrial Psychology (7/77).

## Staff Effectiveness Workshop

**Location:** Management Education Center, Rochester, NY.

**Length:** 40 hours (1 week).

**Dates:** June 1976 – Present.

**Objective:** To provide the staff manager with an understanding of the role of staff, and of how staff functions relate to one another and to line functions, by identifying appropriate influence styles, addressing barriers to effective performance, and determining strategies to gain commitments.

**Instruction:** Program management; influence style analysis; interactive decisionmaking; conflict managment; relationship/role analysis; situational leadership; decision analysis; organization character; management of agreement.

**Credit recommendation:** In the graduate degree category, 1 semester hour in Management (7/77).

## GENERAL SERVICES DIVISION

The Xerox General Services Division (GSD) provides telecommunications, payroll, management consulting, data processing, travel, training, medical, and recreation services to other groups or divisions within the Corporation.

## PERSONNEL EDUCATION AND DEVELOPMENT CENTER

The GSD Personnel Education and Development Center offers courses in systems analysis, project management, programming, management training, and skills development. Course lecture and discussion formats are supplemented by supervised workshops which allow students to practice what they have learned in class. The courses listed below have, in many cases, been grouped under one topical heading because students take those courses as one unit over a period of time.

Source of official student records: Manager, Development and Education, General Services Division, Xerox Corporation, Xerox Square 892, Rochester, New York 14644.

### Advanced COBOL Programming
### 1. COBOL Modular Programming–S/360 (126)
### 2. COBOL Optimization (118)
### 3. Structure Programming–COBOL (130)

**Location:** Rochester, NY.

**Length:** 1. 12 hours (2 days).
2. 12 hours (2 days).
3. 18 hours (3 days).

**Dates:** September 1974–Present.

**Objective:** To increase the student's efficiency in COBOL programming and to introduce advanced techniques.

**Instruction:** Optimization techniques; structured programming; overlay techniques; program segmentation; program linkage. A team programming approach is practiced.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Computer Science (1/75).

### Advanced Data Communications (434)

Refer to Introduction to Data Communications.

### APL Overview (402)

Refer to Introduction to A Programming Language (APL).

### APL Programming (406)

Refer to Introduction to A Programming Language (APL).

### Assembly Language Coding
### 1. Intermediate Assembler (206)
### 2. Introduction to Assembler (202)

**Location:** Rochester, NY.

**Length:** 1. 24 hours (1 week).
2. 18 hours (1 week).

**Dates:** January 1968–Present.

**Objective:** To enable the student to code simple programs in IBM Basic Assembly Language (BAL).

**Instruction:** All the main BAL instructions, including QSAM I/O, are covered. DSECTS; PARMS; EX; TR; TRT; SHIFTS; ORG; CALL; overlays in an Assembly; simple macrowriting. Several small programs that use important Assembly techniques are coded.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Computer Science (1/75).

### Basic Data Communications (430)

Refer to Introduction to Data Communications.

### COBOL Modular Programming–S/360 (126)

Refer to Advanced COBOL Programming.

### COBOL Optimization (118)

Refer to Advanced COBOL Programming.

### COBOL Programming
### 1. Intermediate COBOL (110)
### 2. Introduction to COBOL (106)

**Location:** Rochester, NY.

**Length:** 1. 12 hours (1 week).
2. 30 hours (1 week).

**Dates:** January 1970–Present.

**Objective:** To enable the student to develop a working capability in the use of COBOL and the ability to code simple programs.

**Instruction:** Data definition, redifinition, and manipulation; validation techniques; working with signed fields; techniques involving figurative constants;

boundary alignment considerations; tables; binary search; disk file handling.

**Credit recommendation:** In the lower divison baccalaureate/associate degree category, 3 semester hours in Computer Science (1/75).

### Control Blocks (150)

Refer to IBM OS Programming.

### Core Dump Analysis (154)

Refer to IBM OS Programming.

### Data Processing Project Management (518)

**Location:** Rochester, NY.

**Length:** 18 hours (1 weeks).

**Dates:** September 1974—Present.

**Objective:** To provide an understanding of project management as an organizational structure—how it compares with traditional line/staff functional organizations and why it is an effective method for controlling the systems development process.

**Instruction:** Explanation of the role of project manager. Project management; the project manager; the management of data processing projects; the human factors in project management and planning.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 2 semester hours in Computer Science or Management (1/75).

### Decision Tables (542)

Refer to Introduction to Computer Science.

### Fundamental Computer Concepts (502)

Refer to Introduction to Computer Science.

### Fundamentals of FORTRAN (158)

**Location:** Rochester, NY.

**Length:** 18 hours (1 week).

**Dates:** October 1972—Present.

**Objective:** To provide the student with basic concepts of FORTRAN programming and the ability to code simple programs.

**Instruction:** FORTRAN; syntax; expressions; assignments; control; input/output; format and subprograms; differences in FORTRAN for IBM, Xerox, and Univac systems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Computer Science (1/75).

### IBM OS Programming

1. Control Blocks (150)
2. Core Dump Analysis (154)
3. JCL-I (142)
4. JCL-II (146)
5. OS Internals—S/360 (214)
6. Techniques of File Organization (256)

**Location:** Rochester, NY.

**Length:** 1. 20 hours (1 week).
2. 12 hours (1 week).
3. 18 hours (1 week).
4. 18 hours (1 week).
5. 12 hours (1 week).
6. 12 hours (1 week).

**Dates:** January 1972—Present.

**Objective:** To provide the student with extensive background in IBM OS operating system environment.

**Instruction:** Core layout, job flow; keyword parameters, job statement, EXEC statement, data sets; procedures; generation data group, index-sequential files; interpretation of core dumps; the building and use of control blocks; advantages and disadvantages of ISAM and DISAM.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Computer Science (1/75).

### Intermediate Assembler (206)

Refer to Assembly Language Coding.

### Intermediate COBOL (110)

Refer to COBOL Programming.

### Introduction to A Programming Language (APL)

1. APL Overview (402)
2. APL Programming (406)

**Location:** Rochester, NY.

**Length:** 1. 6 hours (1 week).
2. 30 hours (1 week).

**Dates:** January 1974—Present.

**Objective:** To provide the student with basic concepts of APL programming and to enable him/her to code simple programs.

**Instruction:** APL history; mode of operation; vectors; arrays; reduction; function definition.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Computer Science (1/75).

### Introduction to Assembler (202)

Refer to Assembly Language Coding.

### Introduction to COBOL (106)

Refer to COBOL Programming.

### Introduction to Computer Science

1. Decision Tables (542)
2. Fundamental Computer Concepts (502)

### 3. Introduction to Program Logic (102)

**Location:** Rochester, NY.

**Length:** 1. 12 hours (1 week).
2. 12 hours (1 week).
3. 12 hours (1 week).

**Dates:** June 1972—Present.

**Objective:** To provide the student with a basic understanding of computers and their use as a prerequisite to pursuing more specific computer application courses.

**Instruction:** A general approach to computer functioning, programming logic, and decision tables; history of computers; number systems; flowcharting; an overview of hardware.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Computer Science (1/75).

### Introduction to Data Communications
### 1. Advanced Data Communications (434)
### 2. Basic Data Communications (430)

**Location:** Rochester, NY.

**Length:** 1. 12 hours (2 days).
2. 12 hours (2 days).

**Dates:** January 1973—Present.

**Objective:** To provide the student with a basic understanding of the data communication systems and devices for application in systems analysis and systems programming.

**Instruction:** Characteristics of a teleprocessing system; communications channels; data sets; line control; network design; IBM display stations; transmission control units; a communications controller; common carrier systems.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 1 semester hour in Computer Science (1/75).

### Introduction to Program Logic (102)

Refer to Introduction to Computer Science.

### JCL-I (142)

Refer to IBM OS Programming.

### JCL-II (146)

Refer to IBM OS Programming.

### OS Internals—S/360 (214)

Refer to IBM OS Programming.

### Structured Programming—COBOL (130)

Refer to Advanced COBOL Programming.

### Systems Analysis and Design (510)

**Location:** Rochester, NY.

**Length:** 60 hours (2 weeks).

**Dates:** June 1972—Present.

**Objective:** To develop the initial skills necessary to conduct a systems study for commercial applications within the framework established by a phased approach to systems analysis and design.

**Instruction:** The course consists of various modules associated with the development of a systems study. A case study approach is used to develop skills. Problem definition; fact gathering; interviewing techniques; data organization; fact analysis techniques; input/output design; presentation techniques; system implementation; test development procedures; system follow-up; building an enthusiastic system; communication.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Computer Science (1/75).

### Techniques of File Organization (256)

Refer to IBM OS Programming.

# YWCA OF THE CITY OF NEW YORK

The YWCA of the City of New York, established in 1870, is a building-centered, nonprofit agency and a chartered member Association, in good standing, of The Young Women's Christian Association of the United States of America.

Located at Lexington Avenue and 53rd Street, the YWCA's primary target population is young women between the ages of 18 and 35. Over 200 coeducational courses are offered for all age groups through four major program components: Department of Health, Physical Education, and Recreation; Craft Students League; Department of Continuing Education; and Women's Center. The YWCA serves over 20,000 people annually.

Source of official student records: Assistant Executive Director for Program, YWCA of the City of New York, 610 Lexington Avenue, New York, New York 10022.

## Gregg Refresher

**Location:** YWCA of the City of New York, 610 Lexington Avenue, New York, NY.

**Length:** 40 hours (10 weeks).

**Dates:** June 1978—June 1981.

**Objective:** To reinforce the student's understanding of the principles of Gregg Shorthand in order to develop skill in taking dictation of business materials for transcription.

**Instruction:** Principles of Gregg Shorthand (the mastery of writing sounds, brief forms and phrases, and basic business vocabulary); language skills development (grammar, spelling, and typographical usage). Practice in business letter dictation and development of transcription techniques. Dictation at varying speeds with an attainment level of 70-90 words per minute for 3-5 minutes with a five percent error tolerance.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration, Business Education, or Secretarial Science (5/78).

## Pitman Refresher

**Location:** YWCA of the City of New York, 610 Lexington Avenue, New York, NY.

**Length:** 40 hours (10 weeks).

**Dates:** June 1978—June 1981.

**Objective:** To reinforce the student's understanding of the principles of Pitman Shorthand in order to develop skill in taking dictation of business materials for transcription.

**Instruction:** Principles of Pitman Shorthand (the mastery of writing sounds, short forms and phrases, and basic business vocabulary); language skills development (grammar, spelling, and typographical usage). Practice in business letter dictation and development of transcription techniques. Dictation at varying speeds with an attainment level of 70-90 words per minute for 3-5 minutes with a five percent error tolerance.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Administration, Business Education, or Secretarial Science (5/78).

## 1. Principles of Accounting: Part I
## 2. Principles of Accounting: Part II

**Location:** YWCA of the City of New York, 610 Lexington Avenue, New York, NY.

**Length:** 1. 30 hours (10 weeks).
2. 30 hours (10 weeks).

**Dates:** October 1978—June 1981.

**Objective:** To provide the student with a basic understanding of accounting terminology, concepts, and practices.

**Instruction:** Fundamentals of accounting theory and practice: theory of debit and credit; classification of accounts; principles underlying accounting records; business papers and documents used as the basis of original entry; preparation of balance sheets and income statements; principles and problems of controlling accounts of individual proprietorships and partnerships.

**Credit recommendation:** In the lower division baccalaureate/associate degree category or in the upper division baccalaureate category, 4 semester hours in Accounting, Business Administration, Business Education, or Secretarial Science (5/78). NOTE: Credit should *not* be awarded until Course 2 is completed.

## Principles of Accounting: Part II

Refer to Principles of Accounting: Part I.

# SECTION II

# Introduction

The courses listed in this section are administered by government agencies in New York State under the Comprehensive Employment and Training Act (CETA), the nation's major manpower law. Enacted in 1973, CETA mandates a variety of decentralized training and job placement programs that state and local prime sponsors plan and operate with direct Federal grants under regulations set by the United States Department of Labor.

In 1977, CETA was amended by the passage of the Youth Employment and Demonstration Projects Act (YEDPA). YEDPA extends the scope of CETA by providing for job training and employment opportunities to unemployed, underemployed, and disadvantaged persons 16-21 years old. YEDPA also requires that both in-school and out-of-school youth who are employed in programs established by prime sponsors have the opportunity to earn credit toward high school diplomas or college degrees for participation in the training programs.

The New York Regents Program on Noncollegiate Sponsored Instruction has assisted prime sponsors and educational agencies in New York State in meeting this legislative requirement and educational need. Since 1977, with the aid of New York State Department of Labor grants, over 70 training programs conducted by 13 prime sponsors have been evaluated and recommended for credit at the secondary or postsecondary level. Credit recommendations for secondary level courses were established under the same basic policies and procedures used for postsecondary evaluations, with some minor modifications. The courses cover a wide range of subject areas from automotive technology to health services. Credit recommendations have ranged from one unit in an elective area toward completion of the requirements for a high school diploma to between one and 18 semester hours in the lower division baccalaureate/associate degree category. During the project year 1980-1981, three regional workshops took place which helped to create a dialogue between prime sponsors, their subcontractors, and educational institutions about the kinds of cooperation that could be developed among them.

During the summer of 1981, the Program interrupted its evaluation of training programs to comply with a New York State Department of Labor request to evaluate the Summer Adolescent Vocational Exploration Program (Project SAVE). Community-based organizations which had demonstrated their ability to administer youth programs were selected to participate in the SAVE Project. Credit recommendations at the secondary level were made for individual SAVE programs. The course descriptions and credit recommendations for these programs are listed at the end of this section.

At the end of the project year, a manual was published containing the guidelines for evaluation of training programs and suggestions on how to achieve working relationships between CETA prime sponsors and local educational agencies. The manual was distributed to all CETA prime sponsors, subcontractors, and to appropriate educational institutions. The *Guide*, containing course descriptions and credit recommendations, was sent to participating prime sponsors and appropriate educational institutions.

# CHENANGO COUNTY CETA PROGRAM

The Chenango County CETA Office administers all phases of programs funded through the Comprehensive Employment and Training Act (CETA). The main purpose is to provide services, training and employment opportunities to economically disadvantaged residents of Chenango County. Through close coordination with other county agencies and the New York State Job Services Division a network for referral and delivery of program services is available.

Source of official student records: Program Director, County of Chenango CETA Program, Chenango County Office Building, Norwich, New York 13815.

## Work 101

**Location:** Chenango Educational Center, R. D. #3, Norwich, NY.

**Length:** 205 hours (8 weeks).

**Dates:** July 1980—Present.

**Objective:** To help disadvantaged youths select a career that is compatible with their abilities and interests.

**Instruction:** Career exploration in classroom and shop over a three-week period in five of the following areas: welding, machine trades, carpentry, masonry, heating and plumbing, drafting, residential wiring, auto body, auto mechanics, heavy equipment operation, child care, health services, cosmetology, office practice, and data processing. Work experience in a trade in which the student has expressed a career interest. Career counseling; life skills; remedial instruction in math and reading.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (1/81).

# CITY OF ALBANY
# DEPARTMENT OF HUMAN RESOURCES

The City of Albany Department of Human Resources administers several programs under the Comprehensive Employment and Training Act (CETA) of 1973 and provides funding support for three nonprofit agencies (The City Bureau of Cultural Affairs, The City Arts Office, and The City Bureau of the Aging).

CETA was enacted by the Congress to establish a flexible, decentralized system of Federal, state, and local manpower activities. The law provides a comprehensive range of manpower and supportive services to address the needs of the residents of a particular jurisdiction. The City of Albany is the prime sponsor under CETA for both the City and County of Albany. As such it provides a number of services to the economically disadvantaged and the unemployed or underemployed residents of the County. These services include: vocational training programs, high school equivalency courses, on-the-job training in the public and private sectors, in-school and out-of-school programs for youth, work/education programs for veterans, and counseling and supportive services for program participants.

Source of official student records: Director, Human Resource Center, North Lake and Central Avenues, Albany, New York 12206.

## Electronic Servicing

**Location:** Human Resource Center, North Lake and Central Avenues, Albany, NY.

**Length:** 1200 hours (44 weeks).

**Dates:** May 1977—July 1980.

**Objective:** To provide the student with the knowledge and skills necessary to function as an electronic technician for the electronic servicing field.

**Instruction:** Nature of matter; the fundamentals of A.C. and D.C. circuits necessary for the practice of electronic servicing; the function and operation of electronic devices; A.C. and D.C. component theory and testing; analysis of electronic circuits, such as audio amplifiers, oscillators, R.F. and I.F. circuits; the operation and use of modern test equipment, such as the wide band cathode ray oscilloscope, the cathode ray tube tester-rejuvenator, the multi meter and its associated high voltage probe, the color television Dot and Bar Generator, the television analyzer, the vacuum tube checker, the transistor checker, the AM-FM stereo generator, and the demagnetizing coil. Mathematics and science taught as needed to understand major topics in course. Heavy emphasis placed on modern practical troubleshooting methods on live jobs in a shop situation and on the development of hand skills through the use of hand tools and soldering and desoldering equipment. Actual field experience for 120 hours at public and private job sites.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 30 semester hours in Electronic Servicing (9 lecture, 21 shop) (5/77).

## Life Management Skills

**Location:** Human Resource Center, North Lake and Central Avenues, Albany, NY; Adult Learning Center, 222 South Pearl Street, Albany, NY.

**Length:** 21 hours (3 days).

**Dates:** December 1974—Present.

**Objective:** To enable the participant to develop greater self-awareness, a more positive self-image, an understanding of the needs, values, strengths, and goals of others; to enhance the participant's employability skills.

**Instruction:** Two-day human potential workshop during which participants have an opportunity to discover, share, and reinforce their strengths, assets, values, successes, needs, and goals. One-day workshop on employability skills during which participants consider career alternatives, employer expectations, communications, and interviewing skills. The course format includes small group discussion, videotaped practice interviews, and role-play exercises.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Human Services, Psychology, Social Sciences, or Sociology (4/77).

## Office Occupations/Shorthand

**Location:** Human Resource Center, North Lake and Central Avenues, Albany, NY; Adult Learning Center, 222 South Pearl Street, Albany, NY.

**Length:** 582 hours (20 weeks).

**Dates:** December 1974—Present.

**Objective:** To train the student for entry-level secretarial positions.

**Instruction:** Introduction to Gregg Shorthand theory and skill development, with emphasis on dictation and transcription from notes at progressively faster rates of speed; advanced typing projects and practice in tabulation, financial statements, minutes of meetings, outlines, business reports, business letters, rough drafts, manuscripts, itineraries, and letters of application; business office machines; secretarial office practice; business English. Upon completion of the course, students have attained a minimum shorthand dictation speed of 80 wpm and a minimum typing speed of 40 wpm.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Beginning Shorthand and 3 semester hours in Advanced Office or Clerical Practice (4/77).

## Office Occupations/Typewriting

**Location:** Human Resource Center, North Lake and Central Avenues, Albany, NY; Adult Learning Center, 222 South Pearl Street, Albany, NY.

**Length:** 582 hours (20 weeks).

**Dates:** December 1974—Present.

**Objective:** To provide the student with the skills needed for an entry-level position as a typist or general office worker.

**Instruction:** Typewriting: mastery of the keyboard with a minimum attainment of 40 gross wpm in a 5-minute timed writing with a maximum of 5 errors; letters, memos, tabulations, manuscripts, typing on a line, and proofreading and correcting. Office or clerical practice; longhand dictation receptionist duties, machine transcription, filing, general office practice, operation of business machines (calculators, adding machines, and duplicating machines), stencils and dittos, and applications to keypunch. Business English. Daily production work is graded for style, quantity, and accuracy.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Introductory Typing and 3 semester hours in Office or Clerical Practice (4/77).

# CITY OF BUFFALO
# DEPARTMENT OF HUMAN RESOURCES
# DIVISION FOR EMPLOYMENT AND TRAINING

The City of Buffalo Department of Human Resources provides a variety of human services programming for City of Buffalo residents. Within the Department are the Divisions for Youth, Drug Abuse, Urban Affairs, and Employment and Training. In addition, the Department includes Offices for the Handicapped, Senior Citizens, and Veterans.

The Division for Employment and Training provides employment and training services such as on-the-job training, in-school and out-of-school programs for youth, classroom training, individual referrals, upgrade training, work experience, and counseling and supportive services to program participants. These services are funded through a variety of sources, primarily the Comprehensive Employment and Training Act (CETA). The Division for Employment and Training's principal purpose is the delivery of needed employment and training services to the disadvantaged, unemployed, and under-employed residents of the City of Buffalo.

Source of official student records: Director, City of Buffalo Department of Human Resources, Division for Employment and Training, 703 Main Street, Buffalo, New York 14203.

## Allentown Community Center: Youth Employment and Training Program (Basic Education and GED Preparation)

**Location:** Allentown Community Center, 6 North Pearl Street, Buffalo, NY.

**Length:** 900 hours (30 weeks).

**Dates:** October 1979—Present.

**Objective:** To enable participants to develop their academic skills and to increase their job awareness and employability skills.

**Instruction:** English language skills; reading comprehension in various subject areas; mathematical skills. Life skills such as budgeting, career planning, job interviewing and applications. Work experience in areas such as home weatherization, food service, health occupations, and day care.

**Credit recommendation:** One unit in an academic elective and one-half unit in Career Awareness toward completion of the requirements for a high school diploma (5/81).

## Office Careers (Typing and Basic Clerical Skills)

**Location:** St. Ann's Center, 472 Emslie Street, Buffalo, NY.

**Length:** 600 hours (30 weeks).

**Dates:** October 1979—Present.

**Objective:** To provide the student with basic clerical skills suitable for entry into the job market or as a basis for further college-level study.

**Instruction:** Typing: keyboard theory; speed and accuracy drills; preparation of letters, memos, forms, and tabulation problems. Mastery of the keyboard with a mimimum attainment of 40 gross words per minute in a five-minute timed writing with a maximum of five errors. Other components include shorthand theory, clerical office procedures, and basic business English.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Introductory Typing (5/81).

## Techniques of Field Video Production

**Location:** Media Study Building, 207 Delaware Avenue, Buffalo, NY.

**Length:** 408 hours (24 weeks).

**Dates:** October 1980—Present.

**Objective:** To provide the student with basic skills in field video production as an integral first step toward learning more about television production through further education and work experience.

**Instruction:** General orientation to field video production; story development; scripting; camera operation; sound recording and lighting techniques; editing; basic equipment maintenance. Social and aesthetic perspective on video production.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in a Media/Communications elective (5/81).

# CITY OF ROCHESTER
# OFFICE OF EMPLOYMENT AND TRAINING

The City of Rochester Office of Employment and Training offers a wide range of training programs to economically disadvantaged, unemployed, and underemployed residents of the City of Rochester. As a prime sponsor for the Comprehensive Employment and Training Act (CETA), the Office provides training through various community-based organizations. Programs offered include vocational training, on-the-job training, and programs for in-school and out-of-school youth. Counseling and supportive services are made available to all participants.

Source of official student records: Training Coordinator, City of Rochester Office of Employment and Training, Public Safety Building, Room 240, Rochester, New York 14614.

## Advancement Through Clerical Training

**Location:** Urban League of Rochester, Inc., 50 West Main Street, Rochester, NY.

**Length:** 720 hours (24 weeks).

**Dates:** April 1980—Present.

**Objective:** To provide CETA trainees with typing, clerical, and general office skills for an entry-level position in an office.

**Instruction:** Typing; English; business math; filing; office procedures; secretarial procedures; accounting; stenoscript; business correspondence; dictaphone; charm; receptionist skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Beginning Typing and 3 semester hours in Intermediate Typing (3/81).

## Bilingual Health Training Program

**Location:** Action for a Better Community, Inc., 640 Hudson Avenue, Rochester, NY.

**Length:** 1,330 hours (38 weeks).

**Dates:** October 1977—Present.

**Objective:** To provide bilingual students with the training necessary to obtain employment as nursing or physical therapy assistants in health care institutions.

**Instruction:** A three-phase training program which includes academics, basic English, basic math and science, and nursing science, physical therapy, and supervised clinical and laboratory experience.

**Credit recommendation:** In the vocational certificate category, 1 semester hour in Health Science (1/81).

## Language Skills I

**Location:** Ibero-American Action League, Inc., Office of Education and Skill Training, 938 Clifford Avenue, Rochester, NY.

**Length:** 360 hours (12 weeks).

**Dates:** August 1979—Present.

**Objective:** To give Hispanics with little or no background in English an opportunity to begin to learn the language, and be introduced to American culture.

**Instruction:** Alphabet; survival vocabulary; verbs (simple present tense, simple past tense, future with "will/shall," future with "going to"); pronouns (subject, object, reflexive, possessive); capitalization of nouns and sentence beginnings; use of apostrophe for contractions and possessives; simple description; names of people and things; English sound system; basic mathematics.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (3/81).

## Language Skills II

**Location:** Ibero-American Action League, Inc., Office of Education and Skill Training, 938 Clifford Avenue, Rochester, NY.

**Length:** 360 hours (12 weeks).

**Dates:** August 1979—Present.

**Objective:** To give Hispanics with some background in English an opportunity to develop their language skills more fully, with the intention of facilitating the job-seeking process.

**Instruction:** Job survival skills (prevocational English); possessive nouns and possessive adjectives; simple past tense (regular and irregular verbs); simple future tense; present perfect and past perfect tenses; object pronouns (subject, reflexive, and possessive); quantitative expression; imperative forms; comparative and superlative forms of adjectives; progressive tense; question forms; passive voice; mathematics.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in English as a Second Language (3/81). NOTE: If more appropriate for the individual student, one unit in an elective area toward completion of the requirements for a high school diploma is recommended.

## Skilled Machinist Training

**Location:** Rochester Tool, Die, and Precision Machining Association, 155 Spring Street, Rochester, NY.

**Length:** 990 hours (33 weeks).

**Dates:** October 1979—November 1981.

**Objective:** To train post-high school enrollees in the skilled machinist trade.

**Instruction:** Vocational training on mills, lathes, surface grinders, bench grinders, precision measuring instruments, and numerical controlled machines. Classroom work in mathematics, shop mathematics, safety, basic precision measuring, blueprint reading, introduction to materials, and vocational guidance. Lectures on good work and life habits.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Mathematics, 3 semester hours in Blueprint Reading, and 9 semester hours in Machine Tool Technology (1/81).

## Typing and Clerical Office Procedures

**Location:** Ibero-American Action League, Inc., Office of Education and Skill Training, 938 Clifford Avenue, Rochester, NY.

**Length:** 1,140 hours (38 weeks).

**Dates:** October 1974—Present.

**Objective:** To provide bilingual Hispanic students with typing, clerical, and general office skills necessary for an entry-level position in an office.

**Instruction:** Beginning typing: mastery of the keyboard with a minimum attainment of 35-40 net words per minute in a five-minute timed writing. Intermediate typing: minimum attainment of 45-50 net words per minute in a five-minute timed writing. Clerical office procedures; office machines; filing; English; mathematics.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Beginning Typing, 3 semester hours in Intermediate Typing, and 3 semester hours in Clerical/Office Procedures (3/81).

# CITY OF YONKERS
# OFFICE OF EMPLOYMENT AND TRAINING

The City of Yonkers Office of Employment and Training offers a variety of employment services to residents of the City who qualify as disadvantaged, unemployed, or underemployed. As a prime sponsor under the Comprehensive Employment and Training Act (CETA), it provides on-the-job and vocational training programs, counseling, employment referrals, programs designed to prepare youth for jobs, and public service employment projects. Through contracts with several educational agencies in the area, the Office offers training to its CETA participants.

Source of official student records for courses offered at the Rochambeau CETA Skills Training Center: Director, Rochambeau CETA Skills Training Center, 228 Fisher Avenue, White Plains, New York 10606. Source of official student records for courses offered at the Westchester Educational Opportunity Center: Director, Westchester Educational Opportunity Center, 41 Main Street, Yonkers, New York 10701.

## Auto Body Repair

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length: Version 1:** 920 hours (26 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates: Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To prepare trainees to obtain entry-level jobs in the auto body repair field.

**Instruction:** Introduction to auto body and frame repair; auto body painting and refinishing operations and techniques; welding techniques; auto body metal repair; body and frame alignment; shop management; glass and trim repair and replacment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Auto Trades (7/78).

## Automotive Repair

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length: Version 1:** 1,180 hours (33 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates: Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To prepare trainees to gain entry-level employment in the automotive repair industry.

**Instruction:** Introduction to servicing of automotive systems with emphasis on repair and replacement. Engines; steering and suspension; electrical systems; fuel delivery systems; business fundamentals; brake service; servicing and adjusting automatic and standard transmissions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Automotive Service, Basic Automotive Technology, or Introduction to Auto Mechanics (7/78).

## Bookkeeping
### 1. Bookkeeping I
### 2. Bookkeeping II

**Location:** Educational Opportunity Center, 41 Main Street, Yonkers, NY.

**Length: Course 1, Version 1:** 30 hours (10 weeks).
**Course 1, Version 2:** 50 hours (10 weeks).
**Course 2, Version 1:** 30 hours (10 weeks).
**Course 2, Version 2:** 50 hours (10 weeks).

**Dates: Version 1:** December 1977—September 1978.
**Version 2:** October 1978—Present.

**Objective:** To provide the student with an understanding of the introductory concepts and practices of bookkeeping.

**Instruction:** Fundamentals of bookkeeping theory. Use of journals and ledgers; preparation of financial statements; payroll; notes; depreciation; inventories.

**Credit recommendation: Version 1:** In the lower division baccalaureate/associate degree category, 2 semester hours in Accounting (6/78). **Version 2:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (6/78).

## Business Communications
### 1. Business English
### 2. Correspondence I
### 3. Correspondence II

**Location:** Educational Opportunity Center, 41 Main Street, Yonkers, NY.

**Length:** 100 hours (20 weeks).

**Dates:** December 1977—Present.

**Objective:** To enable the student to develop effective communications skills.

**Instruction:** Development of skills necessary to master effective business communication. Correct grammatical usage; business letters; applications; interviews; report writing; development of oral communication skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Business Communications (6/78).

### Business Math
### 1. Business Math I
### 2. Business Math II

**Location:** Educational Opportunity Center, 41 Main Street, Yonkers, NY.

**Length:** 100 hours (20 weeks).

**Dates:** December 1977—Present.

**Objective:** To provide the student with the knowledge of the fundamentals of applied business mathematics.

**Instruction:** Basic application of mathematics to business problems. Simple interest; finance charges; discounts; bank statements; installment buying; payroll taxes.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business, Marketing, or Secretarial Science (6/78).

### Electronics Occupations

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length:** **Version 1:** 920 hours (26 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates:** **Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To prepare trainees to obtain entry-level positions in the electrical/electronic industry and parts and sales industry.

**Instruction:** Use of hand tools for electronic assembly; interpretation of schematics and pictorials; layout and simple assembly; basic test equipment; soldering; identification and selection of electronic components and associated hardware; basic wire assembly; basic electrical calculations and terminology; construction and fabrication of electronic projects.

**Credit recommendation:** In the vocational certificate category, 3 semester hours in Electrical Instruments or Television Repair; or in the lower division baccalaureate/associate degree category, 1 semester hour in Electrical Instruments or Television Repair (laboratory) (9/78).

### Health Services Occupations (Preparation in Basic Health Services)

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length:** **Version 1:** 805 hours (26 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates:** **Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To provide the student with fundamental skills in health care services for entry-level positions in the allied health or human services fields.

**Instruction:** Fundamentals of patient care; principles and practices of health services including introduction to the health field, basic body mechanics, nutrition, mental health, geriatrics, maternal and child care, and emergency techniques.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Health Sciences or Practical Nursing (2 lecture/laboratory, 2 clinical practice) (9/78).

### Metal Machining Occupations (Metal Fabrication)

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length:** **Version 1:** 864 hours (26 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates:** **Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To prepare trainees to gain entry-level employment in the machinist industry.

**Instruction:** Tool identification; use of measuring devices; operation of power hacksaw, drill press, engine lathe, milling machine, power band saw, hand grinder; use of occupationally related communication and computation skills.

**Credit recommendation:** In the vocational certificate category, 3 semester hours in Machine Tools, Manufacturing Processes, or Metal Fabrication; or in the lower division baccalaureate/associate degree category, 1 semester hour in Machine Tools, Manufacturing Processes, or Metal Fabrication (laboratory) (9/78).

# DELAWARE COUNTY EMPLOYMENT AND TRAINING ADMINISTRATION

The main long-term goal of Delaware County's Employment and Training Program is to provide transitional employment and training opportunities for persons most in need of those services. A second goal is to provide training that will enable the CETA enrollees to acquire the necessary skills that will enable them to obtain employment in the public and private sectors in the county. The third goal of the program is to improve coordination with, and broaden the delivery of, services available on the local level, to best assist those persons identified as most in need. In order to most constructively impact in this area the prime sponsor will actively work with other employment, training-related, and social service programs, as well as with economic development and community development projects within its jurisdiction.

Source of official student records: Assistant Director, Delaware County Employment and Training Office, Box 207, 111 Main Street, Delhi, New York 13753.

### Work 101

**Location:** Western Delaware Educational Center, R. D. #1, Sidney Center, NY.

**Length:** 205 hours (8 weeks).

**Dates:** July 1980—Present.

**Objective:** To help disadvantaged youths select a career that is compatible with their abilities and interests.

**Instruction:** Career exploration in classroom and shop over a three-week period in five of the following areas: welding, machine trades, carpentry, masonry, heating and plumbing, drafting, residential wiring, auto body, auto mechanics, heavy equipment operation, child care, health services, cosmetology, office practice, and data processing. Work experience in a trade in which the student has expressed a career interest. Career counseling; life skills; remedial instruction in math and reading.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (1/81).

# MONROE COUNTY
# OFFICE OF EMPLOYMENT AND TRAINING

The Monroe County Office of Employment and Training provides a variety of manpower services to unemployed, underemployed, and unskilled residents of Monroe County. Supported by the Comprehensive Employment and Training Act, the services include vocational and on-the-job training, youth programs, and public service employment. The office provides centralized training in the area of supportive services and contracts with local agencies to offer other types of training.

Source of official student records: Training Coordinator, Monroe County Office of Employment and Training, County Office Building, Room 207, 39 West Main Street, Rochester, New York 14614.

## Life Management and Employability Skills

**Location:** 50 West Main Street, Rochester, NY.

**Length:** 42 hours (6 weeks).

**Dates:** September 1979—Present.

**Objective:** To provide the participant with an understanding of the process of obtaining and maintaining permanent, unsubsidized employment.

**Instruction:** A series of six workshops covering the following topics: the development of self-image, self-awareness, motivation, and accountability; an understanding of the value and process of goal setting; values clarification; resume writing; interviewing techniques. The format of the workshops includes video presentations, videotaped practice interviews, and group discussions. At the completion of the course, participants will be required to submit a journal relating the information presented in class to the required readings and giving examples of their own applications of the concepts learned in the workshops. NOTE: At the conclusion of the sixth workshop, participants may elect to attend a 7-hour career orientation workshop.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Human Services, Psychology, Social Sciences, or Sociology (8/79).

# NASSAU COUNTY OFFICE OF EMPLOYMENT AND TRAINING

Nassau County's Office of Employment and Training (OET) is the administrative arm of the Nassau County Consortium (CETA prime sponsor for the Towns of Oyster Bay and North Hempstead and the City of Glen Cove). Skills training and/or temporary subsidized employment is offered to the economically disadvantaged, unemployed, and underemployed citizens of the area. The goal is to prepare CETA-eligible persons for permanent unsubsidized employment and to enhance career opportunities. Both on-the-job training and classroom training are provided.

Source of official student records: Manpower Training Coordinator, Nassau County Office of Employment and Training, 175 Fulton Avenue, Hempstead, New York 11550.

### Accounting

**Location:** The Rehabilitation Institute, 233 Jericho Turnpike, Mineola, NY.

**Length:** 725 hours (38 weeks).

**Dates:** September 1975—Present.

**Objective:** To train and/or retrain emotionally handicapped persons to enter competitive employment.

**Instruction:** Bookkeeping systems, balance sheet, and business tranactions; general ledger; bookkeeping for individuals; bookkeeping for business; accounting for sales; accounting for purchases; accounting for cash; periodic summary; accounting for a manufacturing business.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Accounting (7/80).

### Bookkeeping

Refer to Clerk-Typist.

### Bookkeeping and Accounting for Secretaries I and II

Refer to Executive Secretary.

### Business English I and II

Refer to Clerk-Typist.

### Business English I, II, and III

Refer to Executive Secretary.

### Business Math

Refer to Clerk-Typist.

### Clerk-Typist
### 1. Bookkeeping
### 2. Business English I and II
### 3. Business Math
### 4. Office Practice
### 5. Oral Communications
### 6. Typewriting I and II

**Location:** Canterbury Secretarial School, 3000 Hempstead Turnpike, Levittown, NY.

**Length:** 720 hours (29 weeks).

**Dates:** April 1979—Present.

**Objective:** To prepare students to enter the work world as mature, well-trained clerk typists with a varied background in areas of typing, bookkeeping, English, office practice, and oral communications.

**Instruction:** Typewriting; business English; business math; bookkeeping; office practice; oral communications; records management; personal development; office machines.

**Credit recommendation: Course 1:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Accounting (7/80). **Course 2:** In the lower division baccalaureate/associate degree category, 4 semester hours in Business English (7/80). **Course 3:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Math (7/80). **Course 4:** In the lower division baccalaureate/associate degree category, 2 semester hours in Office Practice (7/80). **Course 5:** In the lower division baccalaureate/associate degree category, 2 semester hours in Oral Communication (7/80). **Course 6:** In the lower division baccalaureate/associate degree category, 6 semester hours in Typing (7/80). NOTE: The Clerk Typist Program must be completed in its entirety for a student to receive credit.

### Clerk-Typist
### 1. Introductory Typing
### 2. Intermediate Typing

**Location:** The Rehabilitation Institute, 233 Jericho Turnpike, Mineola, NY.

**Length:** 725 hours (38 weeks).

**Dates:** September 1975—Present.

**Objective:** To train and/or retrain emotionally handicapped persons to enter competitive employment.

**Instruction:** Orientation and training; beginning typist; increasing typing skills; accuracy building; speed building; use of carbon paper; proofreading and error correction; centering and tabulation; job samples; dictating machine operation; statistical typing; specialized typing; one-handed typing (as appropriate).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Introductory Typing and 3 semester hours in Intermediate Typing (7/80).

### Executive Secretary

1. **Bookkeeping and Accounting for Secretaries I and II**
2. **Business English I, II, and III**
3. **Secretarial Procedures I and II, and Records Management**
4. **Shorthand and Transcription I, II, and III**
5. **Typewriting I, II, and III**

**Location.** Canterbury Secretarial School, 3000 Hempstead Turnpike, Levittown, NY.

**Length:** 900 hours (36 weeks).

**Dates:** April 1977—Present.

**Objective:** To prepare students to enter the work world as mature, well-trained secretaries with a varied background in areas of typing, shorthand, bookkeeping, English, records management, and office machines for positions as executive secretaries.

**Instruction:** Career workshop; office machines; personal development; records management; secretarial procedures; shorthand and transcription; typewriting; bookkeeping and accounting for secretaries; business English.

**Credit recommendation: Course 1:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Accounting (7/80). **Course 2:** In the lower division baccalaureate/associate degree category, 6 semester hours in Business Communications (7/80). **Course 3:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Procedures (7/80). **Course 4:** In the lower division baccalaureate/associate degree category, 9 semester hours in Shorthand and Transcription (7/80). **Course 5:** In the lower division baccalaureate/associate degree category, 9 semester hours in Typewriting (7/80). NOTE: The Executive Secretary Program must be completed in its entirety for a student to receive credit.

### Intermediate Typing

Refer to Clerk-Typist.

### Introductory Typing

Refer to Clerk-Typist.

### Medical Office Practice

Refer to Medical Records Clerk.

### Medical Records Clerk

1. **Medical Office Practice**
2. **Medical Terminology**

**Location:** BOCES, 234 Glen Cove Road, Carle Place, NY.

**Length:** 600 hours (20 weeks).

**Dates:** February 1980—Present.

**Objective:** To enable students to develop the skills and job attitudes required to be successfully employed as medical records clerks in medical records departments, special adjunct professional service departments, health centers, doctors' offices, and nursing homes.

**Instruction:** Health and hygiene; medical terminology; typing (intermediate); medical law and forms; conversion tables; orientation to hospital work; medical care center classes and field trips; medical record procedures; machine transcription (medical); office correspondence; office practice; employability sessions. During the last eight weeks each student will spend a minimum of 12 hours per week working in hospitals, nursing homes, or health centers.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Medical Office Practice and 3 semester hours in Medical Terminology (7/80).

### Medical Terminology

Refer to Medical Records Clerk.

### Office Practice

Refer to Clerk-Typist.

### Oral Communications

Refer to Clerk-Typist.

### Secretarial Procedures I and II, and Records Management

Refer to Executive Secretary.

### Shorthand and Transcription I, II, and III

Refer to Executive Secretary.

### Shorthand—Transcription

**Location:** BOCES, North Center, 234 Glen Cove Road, Carle Place, NY.

**Length:** 350 hours (20 weeks); 150 hours theory, 200 hours dictation and transcription.

**Dates:** September 1975—Present.

**Objective:** To enable the student to write Gregg Shorthand for three minutes at 80 w.p.m. and to transcribe within the error limit.

**Instruction:** Introduction to Gregg Shorthand theory and skill development with emphasis on dictation and transcription from notes at progressively faster rates of speed; English usage and rules of punctuation; building of business vocabulary; practice in commonly used words and phrases.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Shorthand and 3 semester hours in Transcription (7/80).

## Stenography

**Location:** The Rehabilitation Institute, 233 Jericho Turnpike, Mineola, NY.

**Length:** 725 hours (38 weeks).

**Dates:** September 1975—Present.

**Objective:** To train and/or retrain emotionally handicapped persons to enter competitive employment.

**Instruction:** Shorthand theory instruction; building speed and accuracy; transcription; spelling and punctuation; letter style; proofreading.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Introductory Stenography and 3 semester hours in Intermediate Stenography (7/80).

## Typewriting I and II

Refer to Clerk-Typist.

## Typewriting I, II, and III

Refer to Executive Secretary.

## Typing

**Location:** BOCES, North Center, 234 Glen Cove Road, Carle Place, NY.

**Length:** 200 hours (20 weeks); **Level I** : 60 hours.
**Level II** : 60 hours.
**Level III:** 70 hours.

**Dates:** June 1979—Present.

**Objective:** To provide the student with typing skills to develop a minimum speed of 50 gross words per minute.

**Instruction: Level I:** Development of minimum speed of 30 gross words per minute in a five-minute timed writing. **Level II:** Development of minimum speed of 40 gross words per minute in a five-minute timed writing. **Level III:** Development of a minimum speed of 50 gross words per minute in a five-minute timed writing. Attainment of acceptable mailable copy on all types of business letters, manuscripts, tables, interoffice memoranda, and statistical reports.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Introductory Typing (Level I), 3 semester hours in Intermediate Typing (Level II), and 3 semester hours in Advanced Typing (Level III) (7/80).

## Word Processing

**Location:** BOCES, North Center, 234 Glen Cove Road, Carle Place, NY.

**Length:** 150 hours (20 weeks).

**Dates:** September 1975—Present.

**Objective:** To enable the student to develop the skills and job attitudes required for a position as a secretary in the word processing area.

**Instruction:** Word processing concepts; work processing as a system; operation of equipment.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Word Processing (7/80).

# NEW YORK STATE DEPARTMENT OF CIVIL SERVICE CETA TRAINING PROGRAM

The New York State Department of Civil Service provides training programs to meet statewide goals under the Comprehensive Employment and Training Act (CETA). The Public Service Careers Section of the Department's Career Opportunities Division has as its primary purpose the development and administration of educational programs designed to recruit and train the disadvantaged and place them in permanent jobs in the public sector. Thus, its purpose coincides with the general objectives of CETA.

The courses listed below are administered by the Public Service Careers Section for CETA participants in the Albany, Buffalo, and New York City areas. Course participants are carefully screened for appropriate skill levels prior to entering the courses. Participants receive counseling and individual support. Classroom instruction is also offered in communication skills and human relations to enhance employment opportunities.

Source of official student records: Chief Public Service Careers Representative, Career Opportunities Division, New York State Department of Civil Service, The State Office Building Campus, Albany, New York 12239.

## Shorthand I

**Location:** Educational Opportunity Center, Troy, NY; Department of Civil Service Buildings in Albany, Buffalo, and New York City.

**Length:** 105 hours (12 weeks).

**Dates:** April 1975—Present.

**Objective:** To provide the student with the shorthand skills needed for an entry-level position as a secretary.

**Instruction:** The course is designed for students who already have a minimum demonstrated skill of 50 words per minute. Increased skill in dictation, transcription, spelling, and English mechanics are developed through practical application in a supervised job setting and individualized classroom instruction in dictation, transcription, spelling, and English mechanics. Upon completion of the course, students are required to pass the New York State Civil Service examination for stenographer (GS-5) and to achieve a stenographic speed of at least 80 words per minute.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Science (5/78).

## Typing I

**Location:** Educational Opportunity Center, Troy, NY; Department of Civil Service Buildings in Albany, Buffalo, and New York City.

**Length:** 105 hours (12 weeks).

**Dates:** April 1975—Present.

**Objective:** To provide the student with the skills needed for an entry-level position as a typist.

**Instruction:** The course is designed for students who already have a minimum demonstrated skill of 30 words per minute. Speed, accuracy, and production are developed through practical application in a supervised work setting and individualized classroom instruction in the preparation of business letters, forms, tables, memoranda, tabulations, and duplication processes. Upon completion of the course, students are required to pass the New York State Civil Service examination for typist (GS-5).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Secretarial Science (5/78).

# NIAGARA COUNTY EMPLOYMENT AND TRAINING DEPARTMENT

The Niagara County Employment and Training Department provides a complete range of manpower and supportive services to address the needs of the residents of the County. These services include vocational training programs, on-the-job training, in-school and out-of-school programs for youth, and counseling and supportive services for program participants. As the prime sponsor under the Comprehensive Employment and Training Act (CETA) for countywide training for economically disadvantaged, unemployed, and underemployed residents, the Department contracts with several agencies to offer training programs.

Source of official student records: Senior Program Coordinator, Niagara County Employment and Training Department, Court House, Lockport, New York 14094.

## Bookkeeping/Accounting

**Location:** Kelley Business Institute, 2103 Main Street, Niagara Falls, NY.

**Length:** 940 hours (40 weeks).

**Dates:** October 1979—Present.

**Objective:** To provide students with skills necessary for employment as bookkeepers, payroll clerks, and accounting clerks.

**Instruction:** Accounting; business math; business machines; payroll procedures; income tax; typing.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Accounting, 4 semester hours in a business elective, 4 semester hours in Business Math/Machines, and 4 semester hours in Typing (10/80). NOTE: The course must be completed in its entirety to receive credit.

## Building Trades

**Location:** Niagara-Orleans Area Vocational Center, Saunders Settlement Road, Sanborn, NY.

**Length:** 630 hours (24 weeks).

**Dates:** October 1979—Present.

**Objective:** To provide the student with the skills needed for an entry-level position in the building trades.

**Instruction:** Safety; hand tools, power tools; building materials; math; measurement; form building; rough framing; roof framing; exterior finishing; plan reading.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Basic Building Trades (10/80).

## Clerk-Typist

**Location:** Kelley Business Institute, 2103 Main Street, Niagara Falls, NY.

**Length:** 705 hours (30 weeks).

**Dates:** May 1980—Present.

**Objective:** To provide students with skills necessary for employment as clerk-typists, file clerks, and receptionists.

**Instruction:** Typing; business communications; recordkeeping.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in a business elective and 4 semester hours in Typing (10/80). NOTE: The course must be completed in its entirety to receive credit.

## Clerk-Typist

**Location:** Niagara-Orleans Area Vocational Center, Saunders Settlement Road, Sanborn, NY.

**Length:** 630 hours (24 weeks).

**Dates:** October 1979—April 1981.

**Objective:** To provide the student with the skills needed for an entry-level position as a clerk-typist.

**Instruction:** Typing: mastery of the keyboard with a minimum attainment of 35 net words per minute in a five-minute timed writing; clerical office procedures; employment preparation; office machines; filing; English usage; mathematics.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in General Office Procedures and 3 semester hours in Introductory Typing (10/80).

## Diesel Mechanics—Heavy Equipment Repair

**Location:** Niagara-Orleans Area Vocational Center, Saunders Settlement Road, Sanborn, NY.

**Length:** **Version 1:** 1,125 hours (46 weeks).
**Version 2:** 1,650 hours (48 weeks).

**Dates:** **Version 1:** October 1976—July 1979.
**Version 2:** August 1979—September 1981.

**Objective:** To develop skills sufficient for entry-level work in diesel mechanics and heavy equipment repair.

**Instruction:** **Version 1:** Diesel theory; fuel injectors and injection systems; engine components; related systems; recordkeeping; steering systems; tire wheels and brakes; springs and frames; transmission and power trains; welding; sanding and painting. **Version 2:** Diesel application; types of engines; measurement; injectors; tools; engine parts; engine reconditioning;

steering systems; clutches; transmissions; repair; operation of heavy equipment.

**Credit recommendation: Version 1:** In the lower division baccalaureate/associate degree category, 18 semester hours in Diesel Mechanics (12 theory, 6 shop) (5/78). **Version 2:** In the lower division baccalaureate/associate degree category, 18 semester hours in Diesel Mechanics (10/80).

### Electronics–Cable Technician

**Location:** Niagara-Orleans Area Vocational Center, Saunders Settlement Road, Sanborn, NY.

**Length:** 750 hours (24 weeks).

**Dates:** April 1980–Present.

**Objective:** To develop skills for entry-level work in electronics and cable technology.

**Instruction:** AC-DC theory; mathematics; electronics component function and theory; test equipment; basic circuits; special circuits; troubleshooting.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 8 semester hours in Basic Electronics (10/80).

### General Secretarial

**Location:** Kelley Business Institute, 2103 Main Street, Niagara Falls, NY.

**Length:** 940 hours (40 weeks).

**Dates:** October 1979–Present.

**Objective:** To provide students with skills necessary for employment in secretarial related careers.

**Instruction:** Typing; shorthand; business communications; secretarial procedures; bookkeeping; business elective (business math or business law).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in a business elective, 4 semester hours in General Office Procedures, 8 semester hours in Shorthand, and 8 semester hours in Typing (10/80). NOTE: The course must be completed in its entirety to receive credit.

### Industrial Mechanic

**Location:** Airco Technical Institute, 476 Louisiana Street, Buffalo, NY.

**Length:** 700 hours (20 weeks).

**Dates:** November 1978–July 1981.

**Objective:** To prepare participants for employment as millwrights, millwright helpers, laboratory mechanics, mechanical set-up men, utility repairmen, and mechanical assemblers.

**Instruction:** Basic arc welding and safety; oxy-fuel brazing and soldering; piping systems; hydraulics and pneumatics; power and hand tools; electrical systems; heating systems; air conditioning; energy saving devices and methods; blueprint reading; industrial mathematics; communication skills.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Industrial Mechanics (10/80).

### Machine Operator

**Location:** Niagara-Orleans Area Vocational Center, Saunders Settlement Road, Sanborn, NY.

**Length:** 270 hours (11-12 weeks)

**Dates:** October 1977–August 1978.

**Objective:** To develop skills sufficient for entry-level work as a production machine tool operator.

**Instruction:** Orientation and safety; blueprint reading; shop math; bench work; lathe tool grinding; basic lathe, drill press, and milling machine operations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Machine Processes or Machine Tools (Shop) (5/78).

### Machinist

**Location:** Niagara-Orleans Area Vocational Center, Saunders Settlement Road, Sanborn, NY.

**Length: Version 1:** 570 hours (23 weeks); includes 483 hours of laboratory work.
**Version 2:** 570 hours (24 weeks).

**Dates: Version 1:** January 1975–July 1979.
**Version 2:** August 1979–Present.

**Objective: Version 1:** To develop skills sufficient for entry-level work in machine operation or maintenance. **Version 2:** To develop skills necessary for entry-level employment as a machinist.

**Instruction: Version 1:** Orientation and safety; blueprint reading; shop math; bench work; lathe tool grinding. Operations of the following types—basic lathe, drill press, milling machine (vertical and horizontal), shaper, advanced lathe, and surface grinder. **Version 2:** Safety; benchwork; blueprint reading; math; tool grinding; lathe; shaper; milling machine operations.

**Credit recommendation: Version 1:** In the lower division baccalaureate/associate degree category, 12 semester hours in Machine Processes or Machine Tools (Shop) (5/78). **Version 2:** In the lower division baccalaureate/ associate degree category, 4 semester hours in Machine Processes or Machine Tools (10/80).

### Major Appliance Repair

**Location:** Niagara County Community College, Saunders Settlement Road, Sanborn, NY.

**Length:** 460 hours (23 weeks).

**Dates :** May 1977–November 1978.

**Objective:** To develop skills sufficient for entry-level work in major applicance repair.

**Instruction:** Electric motors; control devices; operation and servicing of washers, dryers, dishwashers, garbage disposals, trash compactors, electric ranges, electronic ovens, and air conditioners.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 12 semester hours in Service Technology (5/78).

## Refrigeration and Air Conditioning

**Location:** Niagara-Orleans Area Vocational Center, Saunders Settlement Road, Sanborn, NY.

**Length:** 540 hours (26 weeks).

**Dates:** October 1976—August 1979.

**Objective:** To develop skills sufficient for entry-level work in servicing refrigeration units and air conditioners.

**Instruction:** Fundamentals of refrigeration and air conditioning; basic refrigeration systems, domestic, commercial, and automotive air-conditioning systems; refrigeration components including compressors, evaporators, condensers, controls, and metering devices.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 12 semester hours in Refrigeration and Air Conditioning (Shop) (5/78).

## Shorthand

**Location:** Niagara County Community College, Saunders Settlement Road, Sanborn, NY.

**Length:** 345 hours (25 weeks).

**Dates:** October 1976—May 1977.

**Objective:** To prepare students to write shorthand from new matter of medium difficulty for three miniutes at 80 words per minute with no more than six errors.

**Instruction:** Introduction to Gregg Shorthand theory and skill development with emphasis on dictation and transcription from notes at progressively faster rates of speed; English usage and rules of punctuation; building of business vocabulary; practice in commonly used words and phrases.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Introductory Shorthand (5/78).

## Typing

**Location:** Niagara County Community College, Saunders Settlement Road, Sanborn, NY.

**Length:** 250 hours (25 weeks).

**Dates:** October 1976—May 1977.

**Objective:** To provide the student with skills needed for an entry-level position as a typist.

**Instruction:** Mastery of the keyboard with a minimum attainment of 40 gross words per minute in a five-minute timed writing with a maximum of five errors. Basic business applications; personal applications; special applications; letter production; report production.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Introductory Typing (5/78).

## Typing and Clerical Office Procedures

**Location:** Niagara County Community College, Saunders Settlement Road, Sanborn, NY.

**Length:** 500 hours (25 weeks).

**Dates:** October 1976—November 1978.

**Objective:** To provide the student with typing, clerical, and general office skills necessary for an entry-level position in an office.

**Instruction:** Typing: mastery of the keyboard with a minimum attainment of 40 gross words per minute in a five-minute timed writing with a maximum of five errors. Clerical office procedures: telephone procedures, correspondence, English usage; introduction to calculators, duplicators, and dictating-transcribing equipment; filing; mathematical usage; simulated office situations.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in General Office Occupations and 3 semester hours in Introductory Typing (5/78).

## Welding

**Location:** Airco Technical Institute, 476 Louisiana Street, Buffalo, NY.

**Length:** 720 hours (20-24 weeks).

**Dates:** May 1978—April 1981.

**Objective:** To provide the skills and theoretical background needed to operate as a welder, welder's helper, or burner.

**Instruction:** General welding theory; welding symbols and blueprint reading; inspection and qualification; steel fabrication; industrial math and communication skills; oxy-fuel welding and cutting; basic arc welding; advanced arc welding; metal inert welding (MIG); tungsten inert gas welding (TIG); advanced metal inert gas welding (MIG).

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Welding (10/80).

## Welding

**Location:** Niagara-Orleans Area Vocational Center, Saunders Settlement Road, Sanborn, NY.

**Length:** **Version 1:** 580 hours (23 weeks).
**Version 2:** 580 hours (24 weeks).

**Dates:** **Version 1:** May 1975—July 1979.
**Version 2:** August 1979—April 1981.

**Objective:** **Version 1:** To develop skills sufficient for entry-level work in welding processes. **Version 2:** To develop skills for entry-level employment as a welder.

**Instruction: Version 1:** Welding shop equipment; blueprint reading for welders; metals identification; fabrication; fundamental welding techniques, including oxygen-acetylene fusion welding, oxygen-acetylene braze welding; shielded metal arc welding, gas metal arc welding, and tungsten inert gas welding; oxygen-acetylene flame cutting; related theory. **Version 2:** Safety; oxygen-acetylene welding; arc welding; blueprint reading; TIG welding; fabrication.

**Credit recommendation: Version 1:** In the lower division baccalaureate/associate degree category, 12 semester hours in Welding (Shop) (5/78). **Version 2:** In the lower division baccalaureate/associate degree category, 4 semester hours in Welding (10/80).

# ONONDAGA COUNTY
# EMPLOYMENT AND TRAINING AGENCY

The Onondaga County Employment and Training Agency (OCETA) provides a complete range of training, placement, and supportive services to address the needs of those residents of the County outside the City of Syracuse. These services include vocational training programs, on-the-job training, in-school and out-of-school programs for youth, work experience programs, and counseling and supportive services for program participants. As the prime sponsor under the Comprehensive Employment and Training Act (CETA) for countywide training of economically disadvantaged, unemployed, and underemployed residents, the Agency contracts with several training institutions to provide training programs.

Source of official student records: Program Coordinator for Training, Onondaga County Employment and Training Agency, Onondaga County Civic Center, 421 Montgomery Street, Syracuse, New York 13202.

### Auto Refinishing

**Location:** Sidney L. Johnson Vocational Center, 573 East Genesee Street, Syracuse, NY.

**Length:** 910 hours (26 weeks).

**Dates:** July 1980—Present.

**Objective:** To prepare trainees to obtain entry-level jobs in the auto body repair field.

**Instruction:** Introduction to auto body and frame repair; auto body refinishing operations and techniques; welding techniques; auto body metal repair; body and suspension alignment; shop management; glass and trim repair and replacement.

**Credit recommendation:** Three units in an elective area toward completion of the requirements for a high school diploma (6/81).

### Auto Services (Introduction to Basic Auto Maintenance)

**Location:** Onondaga-Madison Board of Cooperative Services, Lakeview Center, Syracuse, NY.

**Length:** 280 hours (8 weeks).

**Dates:** July 1980—Present.

**Objective:** To provide trainees with a basic course covering elementary knowledge and skills necessary to perform minor services on contemporary automobiles.

**Instruction:** Skill areas include lubrication, tire services, cooling, exhaust and minor electrical systems, brakes, light tune-up, and appearance services. Also includes shop safety and the use of service manuals and publications.

**Credit recommendation:** One-half unit in an elective area toward completion of the requirements for a high school diploma (6/81).

### Automotive Diesel/Import Auto Mechanics

**Location:** Northeastern Technical Institute, Inc., Route 20, Lafayette, NY.

**Length:** 800 hours (20 weeks).

**Dates:** October 1980—Present.

**Objective:** To prepare trainees to gain entry-level employment in the automotive repair industry.

**Instruction:** Introduction to measuring devices, engine, carburetion systems, transmissions, clutches, electrical systems, temperature control, and steering and suspension systems.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (6/81).

### Dental Assistant

**Location:** Onondaga-Madison Board of Cooperative Educational Services, 6820 Thompson Road, Syracuse, NY.

**Length:** 910 hours (28 weeks).

**Dates:** February 1980—Present.

**Objective:** To prepare CETA participants for employment as dental assistants.

**Instruction:** Orientation to dental office procedures; grooming; chairside assisting; written and verbal communications; bookkeeping records; office supplies and equipment; filing; patient records; medical and dental office terminology; job simulation activities and clinical work experience.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Health and 1 semester hour in Secretarial Science (2/81).

### Home Health Care Aide

**Location:** Onondaga-Madison Board of Cooperative Educational Services, Court Street Road, Syracuse, NY.

**Length:** 420 hours (12 weeks).

**Dates:** June 1980—Present.

**Objective:** To prepare CETA participants for employment as home health care aides.

**Instruction:** First aid; CPR; nutrition; fire safety; growth and development; anatomy and physiology; basic communication.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Health (2/81).

## Residential Landscaping and Grounds Maintenance

**Location:** Onondaga-Madison Board of Cooperative Services. 6820 Thompson Road, Syracuse, NY.

**Length:** 140 hours (8 weeks).

**Dates:** July 1979—Present.

**Objective:** To familiarize trainees with the operation of machinery commonly used in outdoor areas in horticulture jobs and to increase their awareness and experience in proper grounds and turf care.

**Instruction:** A general approach to tree maintenance, pruning, mulching, fertilization, transplanting, chemical application, turf care, mower operation, dethatching, fertilizing, turf propagation, weed control, small engine safety, introduction to plant materials, plant selection for specific uses, and specific plant identification.

**Credit recommendation:** One-half unit in an elective area toward completion of the requirements for a high school diploma (6/81).

## Secretarial Training

**Location:** Onondaga Community College, Syracuse, NY.

**Length:** 665 hours (19 weeks).

**Dates:** October 1979—Present.

**Objective:** To prepare CETA-sponsored students for entry-level clerical/secretarial positions in Onondaga County.

**Instruction:** Typing: mastery of the keyboard with a minimum attainment of 40 net words per minute on a five-minute timed writing. Stenography and transcription/dictation with a minimum attainment of 60 words per minute. Office practice: communication skills; clerical recordkeeping; office machines.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Business Communications, 3 semester hours in Introductory Typing, and 3 semester hours in Stenography (2/81).

## Tool and Die

**Location:** Central Technical High School, 258 East Adams Street, Syracuse, NY.

**Length:** 1,540 hours (44 weeks).

**Dates:** July 1979—Present.

**Objective:** To make CETA participants eligible for private sector employment in the occupational area of tool and die.

**Instruction:** Safety procedures; shop math; shop practice and projects; shop blueprint reading; measuring instruments; machine shop theory.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 6 semester hours in Machine Process or Machine Tool Technology (2/81).

# SARATOGA COUNTY EMPLOYMENT AND TRAINING ADMINISTRATION

The main purpose of Saratoga County's Employment and Training program is to provide a comprehensive, flexible network of activities and services which respond to the employment and training needs of its eligible population. All opportunities made available by the prime sponsor are designed to increase the earned income of economically disadvantaged, unemployed, and underemployed individuals by enhancing their employability and economic self-efficiency.

A second purpose is to improve coordination with, and broaden the delivery of, services available on the local level, to best assist those persons identified as most in need. In order to most constructively impact in this area, the prime sponsor will actively work with other employment, training-related, and social service programs, as well as economic development and community development projects within its jurisdiction.

Source of official student records: Director, Saratoga County Employment and Training Administration, South Street School, Ballston Spa, New York 12020.

## World of Work

**Location:** Various training sites in Saratoga County.

**Length:** 16 hours (8 weeks); an additional 184 hours of practicum is included.

**Dates:** June 1980—Present.

**Objective:** To enable the participant to develop a greater self-awareness, a more positive self-image, and a greater understanding of the needs, successes, values, strengths, and goals of self-direction, life-planning, and goal-setting, especially as these activities influence career development.

**Instruction:** Exploring job opportunities and career choices. Using self-assessment techniques in applying and interviewing for specific jobs. Safety on the job; employer/employee relationships; working with others; personal budgeting; community awareness; planning for the future. Individual participants' work experiences are integrated with classroom instruction.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (3/80).

410

# WESTCHESTER COUNTY OFFICE OF EMPLOYMENT AND TRAINING

The Westchester County Office of Employment and Training serves the manpower needs of residents in the County by providing employment counseling, testing and career assessment, job placement, on-the-job and skills training, youth employment programs, and special services designed to place women in nontraditional jobs. As part of its efforts to enhance employment opportunities in Westchester County, it is a prime sponsor under the Comprehensive Employment and Training Act (CETA) and contracts with local educational agencies to provide training for disadvantaged, unemployed, or underemployed County residents.

Source of official student records: Contract Coordinator for Skills Training, Westchester County Office of Employment and Training, 148 Martine Avenue, White Plains, New York 10601.

## Auto Body Repair

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length: Version 1:** 920 hours (26 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates: Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To prepare trainees to obtain entry-level jobs in the auto body repair field.

**Instruction:** Introduction to auto body and frame repair; auto body painting and refinishing operations and techniques; welding techniques; auto body metal repair; body and frame alignment; shop management; glass and trim repair and replacement.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Auto Trades (7/78).

## Automobile Repair

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length: Version 1:** 1,180 hours (33 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates: Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To prepare trainees to gain entry-level employment in the automotive repair industry.

**Instruction:** Introduction to servicing of automotive systems with emphasis on repair and replacement. Engines; steering and suspension; electrical systems; fuel delivery systems; business fundamentals; brake service; servicing and adjusting automatic and standard transmissions.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Automotive Service, Basic Automotive Technology, or Introduction to Auto Mechanics (7/78).

## Electronics Occupations

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length: Version 1:** 920 hours (26 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates: Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To prepare trainees to obtain entry-level positions in the electrical/electronic industry and parts and sales industry.

**Instruction:** Use of hand tools for electronic assembly; interpretation of schematics and pictorials; layout and simple assembly; basic test equipment; soldering; identification and selection of electronic components and associated hardware; basic wire assembly; basic electrical calculations and terminology; construction and fabrication of electronic projects.

**Credit recommendation:** In the vocational certificate category, 3 semester hours in Electrical Instruments or Television Repair; or in the lower division baccalaureate/associate degree category, 1 semester hour in Electrical Instruments or Television Repair (laboratory) (9/78).

## Health Services Occupations (Preparation in Basic Health Services)

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length: Version 1:** 805 hours (26 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates: Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To provide the student with fundamental skills in health care services for entry-level positions in the allied health or human services fields.

**Instruction:** Fundamentals of patient care; principles and practices of health services including introduction to the health field, basic body mechanics, nutrition, mental health, geriatrics, maternal and child care, and emergency techniques.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 4 semester hours in Health Sciences or Practical Nursing (2 lecture/laboratory, 2 clinical practice) (9/78).

### Metal Machining Occupations (Metal Fabrication)

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length:** **Version 1:** 864 hours (26 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates:** **Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To prepare trainees to gain entry-level employment in the machinest industry.

**Instruction:** Tool identification; use of measuring devices; operation of power hacksaw, drill press, engine lathe, milling machine, power band saw, hand grinder; use of occupationally related communication and computation skills.

**Credit recommendation:** In the vocational certificate category, 3 semester hours in Machine Tools, Manufacturing Processes, or Metal Fabrication; or in the lower division baccalaureate/associate degree category, 1 semester hour in Machine Tools, Manufacturing Processes, or Metal Fabrication (laboratory) (9/78).

### Typing and Clerical Office Procedures

**Location:** Rochambeau CETA Skills Center, 228 Fisher Avenue, White Plains, NY.

**Length:** **Version 1:** 1,000 hours (28 weeks).
**Version 2:** 837 hours (24 weeks).

**Dates:** **Version 1:** October 1977—September 1981.
**Version 2:** October 1981—Present.

**Objective:** To provide the student with job entry-level typing skills and to introduce the student to general office and clerical procedures.

**Instruction:** Typing: mastery of the keyboard with a minimum attainment of 40 gross words per minute on a five-minute timed writing with a maximum of five errors. Clerical office procedures: telephone, correspondence, English usage, calculators, duplicators, filing, mathematical usage, simulated office situations, recordkeeping.

**Credit recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in General Office Occupations and 3 semester hours in Introductory Typing (6/78).

## SUMMER ADOLESCENT VOCATIONAL EXPLORATION PROGRAM

During the summer of 1980, the Program on Noncollegiate Sponsored Instruction received an additional grant from the New York State Department of Labor to evaluate a special youth project for academic credit at the secondary level. The Project, entitled Summer Adolescent Vocational Exploration (SAVE) was conducted by specific community-based organizations throughout New York State. The CETA Operations Division of the Department of Labor selected the CBO's on the basis of their proven ability to implement youth programs.

The goal of the SAVE project was to assist youths between the ages of 14 and 17 in defining and clarifying their career and educational goals, thereby enhancing their future employability. Approximately 2,200 in-school youths were provided with career counseling and assessment, as well as help in developing decision-making skills. Information on the local labor market was also provided to the SAVE participants. The curriculum included academic advisement and remedial education in English, reading, and mathematics, together with vocational experiences in the private and public sectors. The project was intended to make participants aware of the connection between education and future employability, and thereby motivate them to remain in school.

As a result of the academic evaluations conducted by the Program on Noncollegiate Sponsored Instruction, 19 of the 22 SAVE projects received credit recommendations at the secondary level. The Program is working with CBO's and secondary educational institutions to facilitate the acceptance of the credit recommendations for the participants in the SAVE project.

### Summer Adolescent Vocational Exploration Program

**Location:** Various locations throughout New York State.

**Length:** 192 hours (8 weeks).

**Dates:** July 1980—December 1980.

**Objective:** To enable participants to develop the skills necessary to set their own career and educational goals and control the pursuit of them.

**Instruction:** Vocational exploration and development of skills in self-evaluation, career awareness, decision making, seeking employment, work effectiveness, and personal economics. Realistic career objectives and positive vocational goals are established through individual assessment and counseling. Academic advisement and remedial education in English, reading, and mathematics. Format includes classroom instruction, exposure to various occupations through on-site visits, short-term placement at work sites, and guest speakers.

### Albany Urban League

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Urban League of the Albany Area, Inc., 95 Livingston Avenue, Albany, New York 12207.

### ASPIRA

**Credit recommendation:** One-half unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** ASPIRA of New York, Inc., 296 Fifth Avenue, New York, New York 10001.

### Buffalo Urban League, Inc.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Buffalo Urban League, Inc., 455 William Street, Buffalo, New York 14204.

### Bushwick Youth Support Program

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Bushwick Youth Support Program, 786 Knickerbocker Avenue, Brooklyn, New York 11207.

### Chinatown Planning Council, Inc.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Chinatown Planning Council, Inc., 3 Elizabeth Street, New York, New York 10013.

### Economic Opportunity Commission of Nassau County, Inc.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Economic Opportunity Commission of Nassau County, Inc., 106 Main Street, Hempstead, New York 11550.

### EDAD, Inc.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** EDAD, Inc., 120 East 106 Street, New York, New York 10029.

### Long Island Minority Alliance

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Long Island Minority Alliance, Inc., 497 South Franklin Street, Hempstead, New York 11550.

### Martin Luther King, Jr., New York Support Group, Inc.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Martin Luther King, Jr., New York Support Group, Inc., 60 East 86 Street, New York, New York 10028.

### Masten Park Neighborhood Association

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Masten Park Community Involvement Program, Inc., 485 Best Street, Buffalo, New York 14208.

### Mid-Bronx Youth Skills Development Program

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Mid-Bronx Youth Skills Development Program, 936 Woodycrest Avenue, Bronx, New York 10452.

### Recruitment and Training Program, Inc.-Brooklyn, East Harlem, and South Jamaica

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Recruitment and Training Program, Inc., 162 Fifth Avenue, New York, New York 10010.

### Syracuse Urban League

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Urban League of Onondaga County, Inc., 825 South Salina Street, Syracuse, New York 13202.

### Urban League of Long Island

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Urban League of Long Island, Nassau Office, 15A North Franklin Street, Hempstead, New York 11550.

### Urban League of Westchester County, Inc.

**Credit recommendation:** One-half unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Urban League of Westchester County, Inc., 61 Mitchell Place, White Plains, New York 10601.

### Vannguard Urban Improvement Association, Inc.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Vannguard Urban Improvement Association, Inc., 556 Nostrand Avenue, Brooklyn, New York 11216.

### Westchester Community Opportunity Program, Inc.

**Credit recommendation:** One unit in an elective area toward completion of the requirements for a high school diploma (8/80).

**Source of official student records:** Westchester Community Opportunity Program, Inc., 33 West Main Street, Elmsford, New York 10523.

# APPENDICES

# APPENDIX A
## List of Evaluators

Said Abdel-Khalik
Associate Professor
Department of Nuclear Engineering
University of Wisconsin
Madison, Wisconsin

Isaac Alcabes
Associate Professor
School of Social Work
State University of New York at Buffalo

Deanie Alexander
Director, Bureau for Daycamp and Recreation
Department of Health, City of New York

Sandra Alpert
Director
Practical Nursing Program
Elizabeth Seton College

Joseph Andrews
Supervising Psychologist
United Cerebral Palsy of New
York State/Suffolk County

Steven H. Appelbaum
Assistant Professor of Management
The Graduate School
Pace University

Allan S. Ashley
Associate Professor & Chairman
Department of Administrative Sciences
School of Business Administration
Adelphi University

Sonia Assa
Instructor
World Trade Institute Language School
Mount Saint Mary College

Joseph Augustus
Assistant Professor and Chief Reactor Supervisor
Manhattan College

Anne Babic
Lecturer
College for Human Development
Syracuse University

James L. Bailey
Instructor
Blue Cross/Blue Shield of Greater New York

Michael A. Balas
Associate Dean of Instruction
Nassau Community College

Douglas G. Baldrey
Department Chairman
Engineering and Industrial Technology Division
Hudson Valley Community College

Warren L. Balinsky
Associate Professor
Graduate School of Management and Urban Professions
New School for Social Research

Rae Banks
Consultant
Heuristic Planning and Research Associates, Inc.
New York, New York

Robert Barbato
Assistant Professor of Management
Rochester Institute of Technology

Anthony G. Barrand
Professor of Psychology/Folklore
Marlboro College
Marlboro, Vermont

Cecilia Bartoli
Director of the English Project
Educational Solutions
New York, New York

Bernhard Bartsch
Senior Vice President
Allied Bank International
New York, New York

Kelsey C. Batchelder
Manager, Development & Training Programs
Philip Morris Incorporated
New York, New York

David I. Beck
Instructor
Oneida BOCES

Janet W. Beck
Office for Special Programs
State University College at Brockport

Kenneth Becker
Engineering Consultant
AIL Division of Cutler Hammer
Deer Park, New York

Daniel C. Beckhorn
Senior Instructor, Vocational
School of Vocational Studies
State University of New York at Alfred

Hrach Bedrosian
Professor of Organizational Behavior and Management
Graduate School of Business Administration
New York University

Jack Begelman
Professor, Department of Physical Education
Herbert Lehman College - City University of New York

James F. Bender
Dean, School of Banking and Money Management
Adelphi University

Martin Benis
Associate Professor
Bernard M. Baruch College - City University of New York

William D. Bennett
Principal
Buffalo Vocational Technology Center

William Berliner
Professor of Management
College of Business and Public Administration
New York University

Barry Berman
Associate Professor of Marketing
Rutgers University - Newark
Newark, New Jersey

Dana Middlekauff Bernard
Professor, Aeronautical Science
Embry Riddle Aeronautical University
Daytona Beach, Florida

William L. Berry
Associate Professor
Krannert Graduate School of
Industrial Administration
Purdue University

Charles O. Billings
Associate Professor and Chairman
Department of Banking, Insurance,
Real Estate, and Data Processing
Hudson Valley Community College

Donna Blake
Coordinator/Assistant Professor
Human Services
Genesee Community College

Marion Lucille Blake
Lecturer in English, Adjunct
Rockland Community College

Judith Blank
Faculty Member in Cultural Anthropology
College of the Atlantic
Bar Harbor, Maine

Charles Block
Vice President
The Chase Manhattan Bank
New York, New York

Joseph B. Board
Robert Porter Patterson Professor
of Government
Union College
Schenectady, New York

J. J. Boddewyn
Professor of International Business
Baruch College - City University of New York

Earl J. Boggan
Executive Vice President
D'Youville College

Raymond G. Boglioli
Professor of Business Administration
State University of New York
at Farmingdale

F. J. Bourke
Associate Professor
New York School of Psychiatry

William J. Boyle
Manager (Retired)
New Yorker Hotel
New York, New York

Walter R. Boynton
Assistant Professor
Chesepeake Biological Laboratory
University of Maryland

Richard G. Brandenburg
Dean, School of Management
State University of New York at Buffalo

LeRoy Brendel
Academic Dean
Interboro Institute
New York, New York

Daniel Briggs
Reading Specialist
Schenectady School District
Schenectady, New York

Susan D. Britain
Assistant Professor
Psychology Department
Union College

June N. Brodie
Director
Graduate Program (MS) Nursing
Herbert H. Lehman College -
City University of New York

Jacqueline Brophy
Director, Labor Studies Degree Program
Antioch College
Silver Spring, Maryland

John W. Brown, Jr.
Professor
Monroe Community College

Martha P. Bruce
Educational Consultant/Social Worker
Department of Social Welfare
U. S. Virgin Islands

Jay Bua
Administrator of Instructional Design
and Services
Ebasco Services, Inc.

John Buckley
Assistant Vice President
Morgan Guaranty Trust Co.
New York City

Anthony Buffa
President
Bug Factory, Inc.

Robert R. Bugbee
Director, School of Radiography
The New York Hospital
Cornell University Medical College

Robert L. Bullock
Director of Electronic Data Processing
New York State Department of Taxation
and Finance
Albany, New York

John H. Burns
Director, Graduate Business Programs
Associate Professor of Finance
Rochester Institute of Technology

Arthur A. Burr
Engineering Research Professor
Rensselaer Polytechnic Institute

William Burt
Assistant Professor
State University of New York
at Morrisville

Philip E. Burton
Group Leader
Grumman Aerospace Corporation
Bethpage, New York

Richard J. Butler
Assistant Professor
Rochester Institute of Technology

Donald E. Calvert
Professor of Management
Canisius College

Jane Cannon
Director of Nursing
Genesee Hospital
Rochester, New York

Lea L. Cappella
E.S.L. Tutor
Greece Central Schools

James Robert Carbin
Associate Professor
School of Computer Science and Technology
Rochester Institute of Technology

Vincent Carlin
Data Processing Educational Administrator
Blue Cross and Blue Shield of Greater New York

Andrew N. Carnell
Vice President
Albany Business College

William M. Carpenter
Faculty Member
College of the Atlantic
Bar Harbor, Maine

Carson Carr, Jr.
Director of Upward Bound Program
LeMoyne College
Syracuse, New York

Irving Casey
Chairman, Sociology Department
Russell Sage College

Margie Cason
Educational Director
196 Albany Avenue Day Care Center

Evelyn Castro
Staff Developer
Weeksville School
Bank Street College/Follow Through Program
(National Diffusion Network)

Arthur L. Centonze
Assistant Dean, Graduate School
Pace University

John J. Chai
Associate Professor of Quantitative Methods
School of Management
Syracuse University

Charles M. Chambers
Associate Dean
College of General Studies
George Washington University

Howard Chapnick
President
Black Star Publishing Company
New York, New York

Richard Cheng
Chairman, Department of Computer Science
and Technology
Rochester Institute of Technology

Carl Chiarenza
Chairman, Art History Department
Boston University

Barbara Christoff
Chairman and Professor of Legal Secretarial
Studies
Monroe Community College

Robert J. Cinelli
Coordinator of the Department of Business
Administration
Niagara County Community College

Richard M. Clark
Chairperson
Department of Educational Psychology
and Statistics
State University of New York at Albany

Esther Blair Clarke
Assistant Dean
York College - City University of New York

Thomas L. Clarke
Director, Career Skills
Mutual Benefit Life Insurance Company
Newark, New Jersey

Frank A. Clemente
Principal Consultant
Total Systems Education
Miller Place, New York

Marjorie W. Clere
Instructor (Sign Language/Interpreter Training)
Onondaga Community College

Herman Clurman
Professor of Taxation & Business Law
New York University

Henry D. Coghill
Administrator, Technical and Administrative Personnel
General Electric Company
Schenectady, New York

Jeanne Marie Col
Assistant Professor
Graduate School of Public Affairs
State University of New York at Albany

Joseph A. Colleran
Vice President
International Operations Division
Irving Trust Company
New York, New York

Lynda Colley
Management Consultant
Kathleen Byrne Colling
Assistant Professor of Nursing
School of Nursing
State University of New York at Binghamton

Richard D. Colvin
Program Manager
Management Development Institute
General Electric Company
Crotonville, New York

Robert J. Condon
Associate Professor
Westchester Community College

Bernard J. Connelly
Vice President, Trust Administration
Manufacturers, Traders & Trust Company
Buffalo, New York

Thomas P. Connors
Administrative Service Director
Social Sciences and Public Services Careers
Manchester (CT) Community College

Marshall Cooper
Social Worker
Hempstead Public Schools

Angelo P. Coppola
Instructor, Interpreter
Central New York Association for the
Hearing Impaired
Onondaga Community College

Tara A. Cortes
Associate Professor
Hunter College of the City University of New York

William J. Cosgrove
Assistant Vice President
First National City Bank
New York, New York

George E. Coughenour
Professor, Civil/Construction Academic Unit
Erie Community College

L. Gray Cowan
Dean, Graduate School of Public Affairs
State University of New York at Albany

Barbara Crane
Associate Professor of Photography
School of the Art Institute of Chicago

Gene F. Crimoli
Associate Professor, Psychology
Seton Hall University

Steven E. Cuddeback
Graduate Research Assistant
Dept. of Floriculture and Ornamental Horticulture
Cornell University

Angeline M. Cullinan
Director of Education
The Genesee Hospital
School of Radiologic Technology
Rochester, New York

Rhea Culver
Instructor
Human Resource Center
Albany, New York

Tyree Curry
Assistant Principal
Hempstead Middle School

Robert Cutler
Assistant Professor
Department of Psychiatry
Albany Medical College

Michael P. Cutrona
Graduate Faculty
Wagner College

Barbara Dalto
Director
Powelson Business Institute
Syracuse, New York

Madeline E. Dalton
Director, Bureau for Children with
Retarded Mental Development
New York City Board of Education
New York, New York

Michael M. Danchak
Director of Studies
Computer and Information Science
The Hartford Graduate Center
Hartford, Connecticut

Donald E. Day
Chairman
Mechanical Technology
Monroe Community College

Joanne A. Decker
Recreation Instructor
Kingsborough Community College -
City University of New York

Sr. Marian James Deegan
Associate Professor of Business
Elizabeth Seton College

Robert de Vight
Program Coordinator
Reading Institute
New York University

Lawrence R. De Wine
Instructor, Fire Science Department
Schenectady County Community College
Battalion Chief, Watervliet Fire Department

Michael J. DiBisceglie
Executive Director
Drug Abuse Prevention Program
Community School District 32
New York City Board of Education

Raymond Diehl
Executive Health Administrator
Monroe County Community Hospital
Rochester, New York

Johanne Dixon
Independent Evaluator
Joseph S. Dominelli
Chief of Police
Rotterdam Police Department
Rotterdam, New York

Sr. Marguerite E. Donovan, CSJ
Associate Professor of Business
The College of Saint Rose

Leslie S. Dopkeen
Assistant Professor—Sociology
Onondaga Community College

Emilia Doyaga
Professor of Humanities
State University of New York at Old Westbury

David E. Drumm
Supervisor, Technical Instruction
Taylor Instrument Company
Sybron Corporation

Andrew J. DuBrin
Professor, Behavioral Sciences
Rochester Institute of Technology

David E. Duffee
Associate Professor of Criminal Justice
State University of New York at Albany

Patricia C. Dunn
Coordinator of Continuing Education
in Mental Health
Graduate School of Social Work
Rutgers - The State University of New Jersey

Richard Edward Dwyer
Dean, Center for Labor Studies
Empire State College/SUNY

Samuel A. Dyckman
Professor
Baruch College
City University of New York

Eugene J. Dymek
Director of Life Safety Services and Insurance
Cornell University

W. John Dziadul
Assistant Mortgage Officer
Erie County Savings Bank
Buffalo, New York

Paul C. Eberhardt
Assistant to the Vice President
Bryant & Stratton Business Institute

Donald A. Eldridge
President Emeritus, Bennett College
Coordinating Examiner, Connecticut Board
for State Academic Awards

Marvin J. Elkin
Chairman, Department of Business Administration
Erie Community College

Charles R. Ennis
Associate Professor
Thames Valley State Technical College
Norwich, Connecticut

Joel Evans
Assistant Professor
School of Business
Hofstra University

Marie Ezell
Academic Advisor
University Without Walls
Skidmore College

Frank Fabozzi
Assistant Professor of Banking, Finance
and Investments
Hofstra University

Thomas M. Farley
Vice President
Manufacturers Hanover Trust Co.
New York, New York

Donald Favreau
Director, Center for Executive Development
and Public Safety Management
College of General Studies
State University of New York at Albany

José Femenia
Chairman, Engineering Department
State University of New York
Maritime College

Benedict J. Fernandez
Chairperson
Department of Photography
New School for Social Research

James Finckenauer
Associate Professor
School of Criminal Justice
Rutgers—The State University of New Jersey

Gerald E. Fischer
Professor of Secretarial Science
Niagara County Community College

Dorothy E. Fisk
Director, Health Programs
Oswego County BOCES

John C. Fisk
Assistant Professor
School of Business
State University of New York at Albany

Matthew P. Fitzgerald
Professor of Police Science
Dutchess Community College

Everett Flannery
Program Director
Respiratory Therapy
Borough of Manhattan Community College

James L. Fleishell
Captain of the Port of New York
United States Coast Guard

James T. Fleming
Professor of Education
Chairman, Department of Reading
State University of New York at Albany

Larry Flicker
Professor and Chairman
Department of Electrical Technology
New York City Community College

Robert H. Flynn
Investment Officer
Brown Brothers Harriman and Co.
New York, New York

Anne B. Fosbre
Associate Professor of Accounting
Pace University

Gerardo Franciosa
Adult and Basic Education Project Administrator
Niagara Falls Adult Education Ctr.

Claude C. Freeman
Associate Professor of Landscape Architecture
School of Landscape Architecture
SUNY College of Environmental Science and Forestry

Charles Fromme
Dean of Academic Affairs
Academy of Aeronautics

Alice P. Fuller
Chairperson, Department of Nursing
Bronx Community College

William F. Gaffney
Treasurer
Bankers Trust Company of Albany
Albany, New York

Claire A. Gallagher
Instructor
Central City Business Institute
Syracuse, New York

William Gangi
Associate Professor
St. John's University
Jamaica, New York

William T. Gannon, Jr.
Vice President and Secretary
Bank of Buffalo
Buffalo, New York

Edna Gardenier
Chairperson—Nursing
Dutchess Community College

Joseph K. Gay
Dean of Curriculum
Broome Community College

Jane S. Gerber
Assistant Professor Graduate Center
City University of New York

William S. Gere
Professor of Industrial Engineering
University of New Haven
West Haven, Connecticut

Jerome Gilbert
Director, Research Department
Port Authority of New York and New Jersey
Adjunct Professor, New York University

Michael J. Gill
Vice President
Bankers Trust Company
New York, New York

Maurice E. Gilmore
Associate Professor, Math
Northeastern University

Frank Gisonti
Associate Professor
York College—City University of New York

G. William Glendenning
Professor of Insurance & Risk
Temple University

Mitzi J. Glenn
Director & Advisor on Minority Affairs
Higher Education Opportunity Program
Union College

George Gold
President, Appliances Overseas, Inc.
New York, New York

Myron H. Goldberg
MIS Coordinator
Pace University

Thomas J. Goldrick
Professor and Chairman
Criminal Justice Department
Rockland Community College

James E. Good
President
American Industrial Arts Association
North Greece, New York

Allen W. Goodwin
Manager, Management Development and Training
Anheuser Busch, Inc.

Barry D. Gordon
Research Department Head
Sperry Division
Sperry Rand Corporation
Great Neck, New York

Robert D. Gordon
Instructor
New York Institute of Finance

Wilameta Gorke
Human Relations Consultant
Glenmont, New York

Alfred Granatelli
Retired Chief of Anesthesia
Staten Island Hospital
Staten Island, New York

F. L. Grandison
Professor, Department of Human Development
Family and Community Relations
State University College at Buffalo, New York

John Gray
Chairman, Department of Health Sciences
Brooklyn Center, Long Island University

Kingsley L. Greene
Professor of Natural Resources
State University of New York at Morrisville

Thomas Gregory
Manager, Economic Statistics
The Aluminum Association
New York, New York

Martin M. Greller
Assistant Professor
Management and Organization Behavior
School of Business
New York University

Pasquale A. Grillo
Training Director
Manufacturers Hanover Trust Company
New York, New York

Marjorie Grimes
Program Manager
Management Development Institute
General Electric Company
Crotonville, New York

John V. Gschwendtner
Professor of Physics
Dowling College

John D. Guilfoil
Associate Dean
College of Business and Public Administration
New York University

Charles Guzzetta
Professor
Hunter College—City University of New York

Alfred Haacke
Chairperson, Computer Systems
Rochester Institute of Technology

Albert E. Haas
Dean, School of Business and Public Services
State University of New York at Farmingdale

Theresa Hadjopoulos
Associate Professor
Nassau Community College

George Halverson
Superintendent
Michigan Department of State Police
Lansing, Michigan

John J. Hamacher
Supervisor of Education and Training
Chevrolet Motor Company
Tonawanda, New York

J. D. Hammond
Professor, Department of Insurance and Real Estate
College of Business Administration
Pennsylvania State University

John J. Hampton
Associate Professor of Finance
Seton Hall University

Harold C. Hanson
Attorney
Adjunct Professor, Russell Sage College,
Evening Division

Susan Lee Hargrave
Instructor, Department of Theatre and Fine Arts-
Events Coordinator
State University College at Brockport, New York

Shirley Harrington
President
Harrington, Jenkins, Johnson & Logan
Professional Consultants, Inc.

Steven Harrington
Associate Professor
Department of Computer Science
State University College at Brockport, New York

Carolyn Williams Harris
Project Director
Albany County Head Start

Louis L. Hattman
Chief, Development Branch
Staff and Faculty Development and
Training Division
U. S. Army Signal School
Fort Gordon, Georgia

Carl H. Hauser
Instructor
Cornell University

John K. Hawes
Assistant Professor
Coordinator, Reading Unit
New York City Community College

Peter M. Hayman
Professor
Syracuse University

Samuel H. Hays
Director, Public Executive Project
Graduate School of Public Affairs
State University of New York at Albany

Raymond G. Heinzelmann
Assistant Professor of Marketing
Baruch College—City University of New York

Don Hellriegel
Associate Professor of Organizational Behavior
College of Business Administration
Pennsylvania State University

Ian H. Henderson
Dean, Faculty of Fine Arts
State University College at Brockport, New York

Twila Henneberger
Production Manager W.I.V.B.

Conrad E. A. Herr
Associate Professor in Community Medicine
College of Medicine and Dentistry of New Jersey
Rutgers Medical School

Kenneth F. Herrold
Professor, Psychology and Education
Teachers College, Columbia University

William Herschopf
Chairman, Engineering Technology Department
Nassau Community College

Robert S. Hirschfield
Professor and Chairman
Department of Political Science
Hunter College—City University of New York

John S. Hoagland
Associate Professor, School of Business
State University of New York at Albany

Vivian Hoglund
Director
The Berkeley-Claremont School

George R. Hoguet
Vice President
Bankers Trust Company
New York, New York

Jack Hollingsworth
Professor of Mathematics
Rensselaer Polytechnic Institute

Ronald W. Holloway
Coordinator, Developmental Mathematics
New York City Community College

William K. Holstein
Dean, School of Business
State University of New York at Albany

David E. Hooten
Executive Director
Non-Traditional Studies
Rochester Institute of Technology

Richard Hopeman
Chairman, Organization and Management Department
College of Business Administration
Syracuse University

W. J. Howell, Jr.
Chairman, Department of Communications
Canisius College

Winthrop S. Hudson
Professor of History/Church History
University of Rochester/
Colgate Rochester Divinity School

Robert L. Hutchinson
Dean for Student Services
Adirondack Community College

John W. Hyde
Chairman, Ornamental Horticulture Department
State University of New York at Farmingdale

Salvatore J. Iacone
Assistant Professor of English and Basic Skills
Passaic County Community College

J. Harold Janis
Emeritus Professor of Business Communication
New York University

Agatha P. Jarvis
Research Assistant
Graduate Center
City University of New York

Herbert L. Jensen
Associate Professor
St. John's University

Harry M. Johnson
Associate Dean & Professor of Finance
School of Business Administration
University of Connecticut

Sidney L. Johnson
Superintendent of Schools (Retired)
Troy, NY and Syracuse, NY School Districts

Thomas T. Johnston
Professor
Nassau Community College

C. Robert Jones
Professor, Biological Sciences
Lehman College—City University of New York

Kearney L. Jones
Director, Financial and Administrative Services
New York State Health Department
Albany, New York

C. W. Jordan, Jr.
Manager, Safety Section
Lederle Laboratories

Walter E. Joyce
Associate Dean
Lubin School of Business
Pace University

Barbara Jurena
Instructor
Bryant & Stratton Business Institute

Leslie Kanuk
Professor of Marketing
Bernard Baruch College—City University of New York

Sandra E. Kaplan
Director, Community Mental Health Program
Human Services Department
Onondaga Community College

Samuel M. Kaynard
Regional Director, Region 29
National Labor Relations Board
New York, New York

John Kazanjian
Adjunct Assistant Professor
Division of Business and Management
New York University

Terrence J. Keating
Assistant Professor of Surveying
Department of Civil Engineering
University of Maine at Orono

Charles F. Kelemen
Associate Professor
Ithaca College

Harry M. Kelly
Professor of Finance
School of Business
New York University

James P. Kennelly
Director, Policy Analysis, Human Resources
Appalachian Regional Commission
Washington, D. C.

Steven Ketly
Assistant Professor
Marymount Manhattan College

John M. Kikta, Jr.
Vice President and Manager
Personnel
Lincoln First Bank of Rochester
Rochester, New York

Charles W. Kilbride
Director, Marketing Services and Training
Pan American World Airways
New York, New York

Rudolph Kingslake
Acting Dean, College of Engineering
University of Rochester

John M. Kinn
Director, Educational Services
The Institute of Electrical and
Electronics Engineers, Inc.
New York, New York

Herbert E. Kirmmse
Deputy Superintendent of Banks — New York State

Margaret M. Kirwin
Instructor of Graduate Elementary Education
College of Saint Rose

Elliot Kitay
Coordinator, Industrial Engineering Technology
Nassau Community College

Elaine S. Klein
Associate Dean
Westchester Community College

Samuel Kleinman
Chairman, Accounting Department
Norwalk Community College
Norwalk, Connecticut

Louis A. Klos
Educational Director
United States Trust Company of New York
New York, New York

Ronald A. Knief, Manager
Plant Training TMI-1
GPU Nuclear Group
Middletown, Pennsylvania

John Koller
Chairperson of Media Communications
Medaille College

Vernon R. Kopf
Program Coordinator
Automotive Technology
Rockland Community College

Stephen D. Krashen
English Language Institute
School of General Studies
Queens College — City University of New York

Isabelle A. Krey
Chairperson, Department of Secretarial
Science
Kingsborough Community College —
City University of New York

Leonard B. Krich
Course Director
U.S. Public Health Service Hospital
School of Anesthesia for Nurses
Staten Island, New York

William R. Kuhl
Chairman, Social Science Department
Middlesex County (NJ) College

Jean M. Kulakawski
Supervisor, Health Services
Onondaga-Madison BOCES

Judith Kuppersmith
Assistant Professor
Richmond College — City University of New York

James A. Lahren
Professor and Coordinator of Vocational and
Technical Education
State University of New York at Buffalo

Cherida Lally
Instructor
State University of New York at Purchase
World Trade Institute Language School
of the Port Authority of New York
and New Jersey

John R. LaMarsh
Professor and Head
Department of Nuclear Engineering
Polytechnic Institute of New York

Charles W. Lamden
Partner
Peat, Marwick, Mitchell & Company
New York, New York

Robert I. Landau
Vice President
Bankers Trust Company
New York, New York

Sam Landau
Assistant Vice President
Anchor Savings Bank
Brooklyn, New York

Leland Langbein
Professor of Economics
Monmouth College

Steven L. Law
Instructor
Herkimer County Community College

Willis G. Lawrence
Dean
New York State College of Ceramics
at Alfred

Judy Ann Lazzaro
Professor, Business/Secretarial Science
Genesee Community College

Leon C. Lebowitz
Technical Director
Respiratory Therapy Department
St. Claire's Hospital & Health Center

Francis Lees
Chairman, Department of Economics
St. John's University

Robert D. Leidig
Vice President for Administration
State University College at Utica/
Rome, New York

Vincent Leonard
Associate Professor
Electrical Engineering
Jamestown Community College

Michelle Lester
Fibers Coordinator
Parsons School of Design

Paul Libassi
Dean of Institutional Services
Suffolk County Community College

Julius Liff
Associate Professor of Management
Adelphi University

Grace W. Linden
Elementary School Teacher, Preston Plains School (CT)

Allan Lippman
Assistant Secretary and Training Officer
Training and Staff Development
Rochester Savings Bank

George R. Lockhart
Associate Professor
Adelphi University

Marilyn Loden
Personnel Relations Supervisor
New York Telephone Company

Bernard A. Logan
Associate Professor
Chairman, Engineering Technology
Continuing Education
Rochester Institute of Technology

N. Paul Loomba
Professor and Chairman
Department of Management
Bernard Baruch College—City University of New York

Sanford M. Lottor
Assistant Dean
School of Management
State University of New York at Buffalo

Thomas B. Lukers
Electronics Instructor/Counselor
Angelina College
Lufkin, Texas

Lawrence M. Lynch, Jr.
Department Chairman
Administration of Justice Department
Onondaga Community College

Margaret Lynch
Management Education Department
American Institute of Banking
New York, New York

Christopher J. Mack
Executive Secretary
Building Industry Employers
Association of Niagara County Inc.

Joseph A. Mackey
Supervision Bank Examiner
New York State Banking Department
New York, New York

Clee A. Malfitano
Chairperson, Department of Dental Hygiene
Onondaga Community College

Shirley Marein
Associate Professor of Design
New York Institute of Technology

Robert A. Mariano
Senior Vice President
Lincoln First Bank of Rochester
Rochester, New York

L. Whit Marks
Professor of Physics
Central State University
Edmond, Oklahoma

Bernard L. Martin
Dean, School of Business Administration
Canisius College

Matthew T. Martin
Director of Personnel
Colt Industries, Inc.
New York, New York

William P. Martone
Supervisor of Group Care, Residential Program
Parsons Child & Family Care
Albany, New York

Floyd E. Masten
Assistant Professor
Rockland Community College

William G. Mates
Chairman, Mechanical Technology
Onondaga Community College

William Mathias
Director, Graduate School of Criminal Justice
University of South Carolina

William Allen Mathias
Teacher
Title One Readiness
Richland County School District #1
Columbia, South Carolina

Gloria Mattera
Director, New York State Migrant Center
State University College at Geneseo, New York

Gayle K. Matthews
Vice President and Trust Officer
State Bank of Albany
Albany, New York

Egon Mayer
Associate Professor
Department of Sociology
Brooklyn College

Fred Mayo
Mentor/Coordinator
Mid-Hudson Learning Unit
Empire State College
New Paltz, New York

John T. McCall
Associate Dean
Westchester Graduate School of Business
Pace University

Robert C. McClelland
Director of Training
Eastman Kodak Company
Rochester, New York

John X. McConkey
Dean, School of General Studies
Dowling College

Edward H. McCormack, Jr.
Chief of Fire Training
Massachusetts Firefighting Academy

Sister Jane McCullough, RSM
Assistant Professor
Secretarial Science Department
Maria College

Harold McFarlane
Section Head, Analysis and Applications
Applied Physics Division
Argonne National Laboratory
Idaho Falls, Idaho

Beverly G. McKay
Associate Professor
State University of New York at Morrisville

Douglas D. McNair
Sales Curriculum Manager
Xerox International Center for Training and
Management Development
Leesburg, Virginia

Rev. Robert F. McNamara
Professor of Church History
St.Bernard's Seminary

Edmund J. McTernan
Dean, School of Allied Health Professions
State University of New York at Stony Brook

James R. Meehan
Dean of Administration, Emeritus
Hunter College – City University of New York

Charles Mengel
Professor and Chairman
New York City Community College – City University

Lorraine R. Merrick
Deputy Superintendent for Instruction
Syracuse City School District

Robert Meserve
Associate Professor of Civil Engineering
Northeastern University

Bernadette Metzler
Professor, Business Education
Hunter College – City University of New York

John K. Mickelsen
Computer Analyst
General Electric Company
Syracuse, New York

Eleanor S. Mills
Coordinator of Student Health Services
Westchester Community College

Dennis M. Mirabito
Coordinator
Chenango County Chamber of Commerce

Joanne H. Misener
Dean of Secretarial School
Bryant & Stratton Business Institute

Fred C. Mitchell
President
Evergreen Mart, Inc.
Syracuse, New York

George F. Monks
2nd Vice President – Claims (Retired)
New York Life Insurance Company
New York, New York

Frank Moody
Director, Secretarial Sciences
Central City Business Institute
Syracuse, New York

Edward L. Morgan
Professor and Chairman
Department of Criminal Justice
State University College at Buffalo, New York

Donald R. Moscato
Associate Dean
School of Business Administration
Iona College

Amicus Most
Director, Institute of International Business
Pace University Graduate School
New York Campus

Martha P. Mourning
Instructor
SUNY - Binghamton School of Nursing

Joan C. Mullaney
Assistant Professor
Developmental Studies
Monroe Community College

Joseph A. Mullen
Private Consultant
Boston, Massachusetts

A. Douglas Murch
Senior Vice President
The Prudential Insurance Company of America
Roseland, New Jersey

Mary Carmen Murphy
Chairperson
Onondaga Community College
Human Service Program

Gavin Murray
Director
Counseling Associates
Staten Island, New York

Harvey Nadler
Director, Program in T.E.S.O.L.
School of Education, Health, Nursing,
and Arts Professions
New York University

John L. Nagi
Chairman, Electrical Technology Department
Hudson Valley Community College

Masakuni Nakazono
Instructor
Norwalk State Technical College
Norwalk, Connecticut

Sebastian V. Nardo
Professor of Mechanical and Aerospace Engineering
Polytechnic Institute of New York

Andrea Nevins
Director of Training & Human Resource Development
Woodhull Medical and Mental Health Center

Lionel Nowak
Professor of Music
Bennington College

Richard A. Nystrom
Associate Director and Professor
Albany—Hudson Valley Physician's
Assistant Program

Gerald O'Brien
Director of Guidance
Lafayette High School

Joan E. O'Brien
Program Director
Radiation Therapy Program
State University of New York Upstate Medical Center
Syracuse, New York

C. Leonard O'Connor
Professor/Chairman, Department of Radiological
and Health Sciences
Manhattan College

Robert L. Oddy
Professor of Counseling
Jamestown Community College

L. Richard Oliker
Associate Dean
College of Business Administration
Syracuse University

Edmund J. O'Neal
School Administrator
Albany Public Schools

Albert J. Ossman, Jr.
Professor of Political Science
Associate Dean, Academic Affairs
Eisenhower College/RIT
Seneca Falls, New York

Joseph W. Papalia
Department Chairman
Associate Professor
New York City Community College

LeRoy T. Parsons
Assistant Professor
New York City Community College

Robert J. Pasciullo
Assistant Vice President for Learning Resources
Empire State College

Alida Pastoriza-Maldonado
Assistant Professor
CUNY - Hostos Community College

Marlene E. Payne
Instructor in Nursing
State University of New York at Binghamton

Leland Pearson
Professor of Nautical Science
United States Merchant Marine Academy

Richard J. Pegis
Visiting Associate Professor
Computer Science Department
State University College at Brockport, New York

Jane K. Pelton
Nurse Coordinator
Jefferson Vocational Technical Center

H. Anthony Pennyfeather
Vice President
Center for Resource Development

Sandra Peterson-Hardt
Associate Professor of Sociology
Russell Sage College

Jeannine Petit
ESL Coordinator
Migrant Education Program

Dashamir M. Petrela
Chairman, Division of Engineering and
Agricultural Technologies
State University of New York at Farmingdale

David W. Petty
Dean of Instruction
Jamestown Community College

Julia C. Piquette
Professor and Chairman
Department of Speech and Theatre Arts
State University College at Buffalo, New York

Joan Pisarra
Teacher
Eastchester Junior-Senior High School

Bernard Pollack
Professor of Health Sciences
Brooklyn College

Herman W. Pollack
Chairman, Physical Science Division
Orange County Community College

William R. Porter
Vice President for Academic Affairs
State University of New York Maritime College,
Fort Schuyler

Robert Posnak
Partner
Ernst & Ernst

Richard B. Power
Professor of Biology
Iona College
New Rochelle, New York

Robert E. Powers
Assistant Vice President
Central Savings Bank
New York, New York

Paul E. Proske
President
Northfield Savings Bank
Staten Island, New York

Gordon Purrington
Professor, School of Education
State University of New York at Albany

Frank S. Pyne
Professor, Air Conditioning Technology
State University of New York at Farmingdale

Margaret L. Quirk
Assistant Vice President
Irving Trust Company

D. Gary Rake
Service Manager
Bill Rapp Pontiac, Inc.

Jaak Rakfeldt
Assistant Professor and Coordinator
Human Services Department
Mohawk Valley Community College

Gale E. Rand
Coordinator of the Division of
Professional Programs
Elmira College

Frank R. Rappel
Vice President
Manufacturers Hanover Trust Company
New York, New York

Larry Reader
Chairperson, Respiratory Therapy Department
Onondaga Community College

Theodore W. Rector
Associate Professor and Director
Programs in Applied Social Sciences
School of General Studies and
Professional Education
State University of New York at Binghamton

Carl W. Reed
Assistant Professor
Monroe Community College

Mary F. Reed
Career Employment Coordinator
Saratoga/Warren B.O.C.E.S.

Edward Reese
Supervisor, Technical Instruction
Taylor Instrument Company/Sybron Corporation

Margaret Regan
Training Manager
Consolidated Edison Company of New York, Inc.

Thomas J. Regan
Dean, Division of Business
Middlesex County (NJ) College

Nicholas B. Renzi
Senior Instructional Systems Engineer
Sperry Gyroscope Company
Great Neck, New York

David V. Reynolds
Technical Director of Respiratory Therapy
The Hospital
Sidney, New York

Gerald K. Rhode
Vice President
System Project Management
Niagara Mohawk Power Corporation
Syracuse, New York

H. Robert Rice
Vice President for Academic Affairs
Central City Business Institute
Syracuse, New York

Robert Ripley
Body Shop Manager
Sam Dell Dodge Corporation
Syracuse, New York

Carol K. Ritter
Clinical Assistant Professor
Department of Physical Therapy
New York University

Mildred Roberts
Assistant Professor
Coordinator, Child Development Concentration
LaGuardia Community College

Geoffrey Rogers
Director, Atlantic Coast District
Federal Maritime Commission
New York, New York

John E. Rogers
Associate Professor
Business Administration
Onondaga Community College

Leonard S. Romney
Chairperson, Human Services
Rockland Community College

Judith Rose
Teacher
BOCES No. 2
Spencerport, New York

Yvonne Rosecrans
Associate Professor
Secretarial Studies
Erie Community College

Larry J. Rosenberg
Associate Professor of Marketing
New York University

Ellen Roznowski
Assistant Director
Occupational Safety & Health Program
Center for Labor Studies
Empire State College

Henry Rubenstein
Professor of Accounting
Pace University

Geraldine Ruiz
Chairperson/Radiologic Technology
Hostos Community College

Paul Ryan
Curriculum Director
Walton Central School

Robert A. Ryan
Manager
Trades/Technical Training and
Factory Employment
Carrier Air Conditioning Co.

Anthony T. Sallustio
Associate Professor and Chairman
Foreign Languages Department
Pace University

Stanley Samber
Chairman, Department of Accounting
and Business Administration
Nassau Community College

Franklyn D. Sanchez
Principal
Junior High School 98
Bronx, New York

Pascual Sanchez
Director of Anesthesia
St. John's Episcopal Hospital
Brooklyn, New York

Melvin Sandler
Associate Professor and Chairman
Electrical Engineering Curriculum Department
The Cooper Union for the Advancement of
Science and Art

John E. Sands
Professor of Law
Albany Law School
Union University

Allen Sapp
Professor of Music
State University of New York at Buffalo

John N. Sarrubbo
Assistant Professor
Mechanical Technology
Westchester Community College

James Satterwhite
Director, Office of Staff Development
Human Resources Administration
City of New York

Joseph A. Scalafani
Assistant Professor
School of Business
Hofstra University

Eric Schafler
Industry Hotel Technology
Nassau Community College

Leon Schiffman
Professor of Marketing
Bernard Baruch College—
City University of New York

Aaron Schmais
Coordinator, Undergraduate Social Work Program
New York University School of Social Work

Karl M. Schmidt
Professor of Political Science and
Public Administration
Maxwell School
Syracuse University

William L. Schurer
Professor
State University of New York at Morrisville

Ralph J. Schwarz
Professor of Electrical Engineering and
Associate Dean
Columbia University

Theodore Schwartz
Professor and Chairman
Department of Management and Marketing
Iona College

Martin J. Schwimmer
Professor of Business
United States Merchant Marine Academy
Director of Personnel Research
United States Maritime Administration

Martin L. Scott
Biomedical Photographic Specialist
Scientific and Technical Photography Group
Eastman Kodak Company
Rochester, New York

Gary E. Seabury
Trades and Technical Training Supervisor
Carrier Air Conditioning Company
Syracuse, New York

John Peter Seagle
Associate Professor
Director, Management Science Subprogram
School of Business
State University of New York at Albany

Joan B. Seibert
Senior Medical Physicist
Overlook Hospital
Summit, New Jersey

Herbert W. Seliger
Associate Professor of Linguistics
Director, ESL Programs
Queens College—City University of New York

Peter Semanchuk
Coordinator - Mechanical Engineering
Technology Programs
Erie Community College

Edward H. Serpa
Assistant Professor
Electrical Technology
Fulton-Montgomery Community College

J. Richard Shanebrook
Professor of Mechanical Engineering
Union College
Schenectady, New York

Mildred E. Shannon
Associate Dean of Professional Studies
John Jay College of Criminal Justice
New York, New York

Nancy Sharples
Instructor, Art Division
College of Saint Rose

William S. Shoemaker
Director, School of Photographic Arts
and Sciences
Rochester Institute of Technology

Edward Silverberg
Director, Bureau of Community Programs
Department of Personnel, City of New York
New York, New York

Robert Smith
Director of Biomedical Communications
New York State College of Veterinary Medicine

Thomas G. Smithsi
Technical Careers Institutes
New York, New York

Adolf Snaidas
Associate Professor
Douglass College
Rutgers—The State University of New Jersey

David Soelter
Executive Vice President
United Fidelity Life Insurance Company
Dallas, Texas

Irwin Sollinger
Associate Professor
Coordinator, Graduate Program in
Guidance and Counseling
Herbert H. Lehman College—
City University of New York

Gerald R. Spittler
Director of Flight Training
Parks College of Saint Louis University

Ronald E. Stappenbeck
Manager, Academic Information Systems
Rochester Institute of Technology

Daniel L. Staunton
We Mo Co Occupational School
Brockport, New York

William E. Steckman
Professor
Graduate Business School
C.W. Post Center
Long Island University

Joseph A. Steger
Colt Industries, Inc.
New York, New York

Norman Stein
Associate Professor of Psychology
Department of Psychology
Syracuse University

Edward J. Steppe
Assistant Professor
State University of New York at Farmingdale

Benjamin Stevenson
Chairman, Engineering Science Division
New Jersey Institute of Technology
Newark, New Jersey

Leland E. Stokes, Jr.
Coordinator, Human Resources Development
Program
Cornell University NYSSILR

Gary Strong
Project Coordinator
Norwich Continuing Education Program
State University of New York at Morrisville

John J. Sullivan
Associate Dean of Professional Services
John Jay College of Criminal Justice—
City University of New York

John M. Summers
Jasco Tool & Die Company
Rochester, New York

Elsie Svozil
Director, School of Anesthesia
The Roosevelt Hospital
New York, New York

John W. Swanson
Vice President, Emigrant Savings Bank
New York, New York

Arthur J. Sweat
Assistant Professor
Engineering Technology
Memphis State University

Rita Swedlow
Director, Early Childhood Center
Queens College—City University of New York

Donald J. Sweeney
Associate Professor and Chairman
Mathematics, Science and Computer Science
St. John's University

Kazuye Takei
Professor and Chairperson
Secretarial Science Department
Bronx Community College

Karen A. Tarnow
Continuing Education Coordinator
Upstate Medical Center
Syracuse, New York

Miriam Tatzel
Associate Professor
Empire State College
State University of New York

Leon J. Taub
Assistant Professor
Department of Air Conditioning Technology
State University of New York at Farmingdale

Bruce M. Taylor
Associate Professor—History, Secondary Education
University of Dayton

Russel R. Taylor
Director of Business Programs and Assistant
Professor
College of New Rochelle

Morton Temsky
Chairman, Business & Law Department
Schenectady County Community College

Frederick H. Terry
Associate Professor
Marketing—Retailing Department
Nassau Community College

Charles B. Thompson
Associate Professor of Data Processing
State University of New York at Farmingdale

William P Thompson
Professor, Communications
Corning Community College

William Thomson
Chairman, Music
State University of New York at Buffalo

Melvin D. Thornhill
Chairman, Department of Radiologic Technology
Westchester Community College

Frederick Thumhart
Inspector
New York State Police
Albany, New York

Joseph F. Tierney
Division of Supervision and Regulation
Federal Reserve System
New York, New York

D. Virginia Tilden
Chairperson, Nursing Department
Onondaga Community College

Constance H. Timberlake
Department Chairperson
Community Services
College for Human Development
Syracuse University

Edward A. Tomeski
Associate Professor and Coordinator of
Computer-Management Area
Fordham University

Paul A. Trent
Assistant Professor
Siena College

Joseph M. Tretter
Associate Professor of Mechanical Technology
Erie Community College
Buffalo, New York

Margaret Turner
Instructor
Mount Saint Mary College

Ernest B. Uthgenannt
Assistant Professor
University of Connecticut

Carolyn Vacanti
Director of Nursing
St. Mary's Hospital
Rochester, New York

David F. Van Aken
Director of Training
New York State Police

Sonja Van Buren
Chairman, Secretarial Science Department
Hudson Valley Community College

Marilyn J. Van Graber
Director
Diogenes Associates
Burlington, Vermont

William R. Veenis, Jr.
Supervisor
Reading and Language Arts
Greece Central School District

Joseph Verdicchio
Coordinator, Social Studies Department
Edgemont High School

Michael Vinciguerra
Assistant Vice President of Academic Affairs
State University of New York at Farmingdale

Marion J. Voss
Research Manager
Thatcher Glass Manufacturing Company
Elmira, New York

Charles C. Walcutt
Graduate Professor of English
Queens College—City University of New York

June Walker
Assistant Professor—Technical Director
Respiratory Therapy Program
Passaic County Community College

Raymond A. Wall
Associate Professor
Westchester Community College
Lecturer—Teachers College, Columbia University

R. Wayne Walvoord
Assistant Vice President and Manager
International Department
Security Trust Company
Rochester, New York

John Wanous
Assistant Professor of Management
College of Business and Public Administration
New York University

Chaim I. Waxman
Associate Professor
Rutgers University

John Weber
Dean of Instruction
Jamestown Community College

Bluma B. Weiner
Professor of Special Education
Yeshiva University

Nathan Weiner
Professor and Department Head, Electrical Technology
College of Staten Island
City University of New York

Steven Weisbart
Assistant Professor
Department of Insurance
School of Business Administration
Georgia State University

Ira Richard Weiss
Assistant Professor of Accounting
Graduate School of Business Administration
New York University

Marvin Weiss
Dean of Business
New York Institute of Technology

William M. Welty
Professor of Management
Lubin Graduate School of Business
Pace University

Florence D. Wiener
Director, Communication and Learning Center
Marymount Manhattan College

Donald A. Wilson
Parker Survey Associates, Inc.
Seabrook, New Hampshire

Ed Wilson
Professor of Art
Vice Chairman for Studio
State University of New York at Binghamton

Ruth Witkus
Chairman, Biology Department
Fordham University

Jerome L. Wohlstein
Coordinator, Construction and Facilities Management Programs
Iona College

Philip Wolitzer
Professor and Chairman
Department of Accounting, Taxation and Law
Long Island University

Geri Wood
Instructor in Nursing
Hunter College

Herman O. Worzel
Professor
State University of New York at Morrisville

John H. Wright
Chief Engineer (Acting)
Fairchild Republic Company
Farmingdale, New York

Edward J. Yarosz
Associate Professor and Coordinator, Graduate Programs in Guidance and Counseling and Rehabilitation Counseling
Hunter College—City University of New York

Raymond P. Yelle, Jr.
Assistant Professor
State University of New York
Agricultural and Technical College at Alfred

Richard D. Zakia
Professor
Rochester Institute of Technology

Rolf A. Zerges
Associate Professor and Chairperson
Business Administration and Community Studies
Rochester Institute of Technology

Maxine Zwiebel
Director of Secretarial Studies
Katharine Gibbs School

# APPENDIX B
# Program Policies and Procedures

The following policies and procedures for the evaluation of noncollegiate sponsored courses are those currently followed by the Program. They are based on policies and procedures approved by the New York State Board of Regents and the Commission on Educational Credit of the American Council on Education in 1975.

## Eligibility

1. Organizations eligible to submit educational programs for review are noncollegiate institutions whose primary focus is not education, such as private industry, governmental agencies, labor unions, voluntary associations, and professional associations. Participation in the Program is on a voluntary basis, with each organization choosing, in consultation with Program staff, those courses which it wishes to submit for evaluation.

2. Only educational programs or courses conducted on a formal basis and with official approval of the sponsoring organization will be considered. Courses must be under the control of the sponsoring organization. Informal on-the-job training and job experience will not be reviewed.

The following guidelines shall be used in selecting courses or programs for review:

a. The material presented in each course must be on the postsecondary level.

b. The instructors should be selected on the basis of their qualifications to teach the subject matter, including their formal education and experience.

c. The course should serve people who can use the credit recommendations toward a postsecondary credential.

d. Appropriate procedures (test, projects, oral quizzes, etc.) must be used in the courses to evaluate student performance. Correspondence and independent study courses must include a proctored examination administered under secure conditions.

e. Intensive courses should be of at least five days duration (35-40 hours of instruction).

f. Intensive technical courses involving laboratory or workshop exercises should be at least 10 days in length (70-80 hours of instruction).

g. Courses conducted over an extended period of time should contain at least 30 hours of instruction.

h. Individual courses that do not meet the above time requirements may be grouped together for purposes of review.

i. Courses that have not been offered during the preceding five years will not be reviewed.

## Documentation

3. Sponsoring organizations will submit information concerning the administration of their educational programs. On the basis of this information, Program staff will decide whether the organization demonstrates sufficient stability and control to present its courses for review. Information submitted will include a description of the administration of the training function, procedures for selecting and evaluating instructional staff, procedures for course development, evaluation, and revision, and procedures for insuring consistent quality in programs delivered at multiple locations. This submission will be a part of the Program's permanent record on the sponsoring organization.

4. Each participating organization must maintain permanent and official records of students' participation and performance in any course which is reviewed. The sponsoring organization must demonstrate the capability to store and retrieve student records for the period covered by the credit recommendations.

5. For the evaluation of courses involving classroom instruction the following information must be submitted:

a. Course syllabus describing the objectives and content.

b. Instructional materials used for the course (textbook, audiovisual materials, case studies, problems, etc.).

c. Required or suggested qualifications of course participants.

d. Qualifications of instructional staff.

e. Techniques used to evaluate student performance (including samples, if available).

f. Duration of the course.

6. For courses and programs involving other instructional approaches, e.g., self-paced or independent study courses, some of the foregoing information is neither appropriate nor relevant to the process. However, appropriate and available items must be provided in sufficient detail to allow each course to be judged by the review team.

## Course Review

7. Preferably, each review session will be conducted at the training site of the sponsoring organization. Wherever the session is held, persons from the organization should be available to answer questions that arise, during the review of the course materials and to describe the process by which the curriculum is developed, evaluated, and revised.

## Selection of Reviewers

8. In conducting course reviews, no fewer than three subject-matter specialists in the field under consideration will be used. The names of individuals to serve in this capacity will be solicited from postsecondary institutions, professional and educational associations, accrediting agencies, and noncollegiate organizations. In general, the review team will include one practitioner from a noncollegiate organization.

9. The following criteria will be considered in selecting course reviewers:

a. Area of reviewer competence as evidenced by formal training and experience will closely approximate area of courses being reviewed.

b. Preference will be given to reviewers who have had five years or more teaching experience (with the exception of the practitioner noted in 8 above).

c. Preference will be given to reviewers with experience in curriculum development, e.g., membership on a curriculum committee (with the exception of the practitioner noted in 8 above).

d. Preference will be given to reviewers who are generally receptive to granting credit for learning in noncollegiate settings.

## Evaluative Criteria

10. In the exercise of their professional judgment, review team members will consider the following factors in determining a credit recommendation:

a. The subject matter of a course, its level of difficulty, and its applicability to a range of postsecondary programs. These factors are of primary importance.

b. Distinctive aspects of noncollegiate education, including the background and selection of both instructors and students, the duration of a course, ongoing application of classroom learning in the students' work, and motivational factors.

c. Duration and concentration of effort in relationship to the generally accepted practice for determining credit in postsecondary institutions. Normally, academic credit is assigned on the basis of one semester credit hour for each 15 classroom contact hours plus 30 hours of outside preparation or equivalent; one semester credit hour for each 30 hours of laboratory work plus necessary outside preparation or equivalent; one semester credit hour for not less than 45 hours of shop instruction (contact hours or equivalent). Credit recommendations made by reviewers shall not, however, be derived by a simple arithmetic conversion. Intensive courses offered by noncollegiate organizations do not necessarily require as much outside preparation as many regular college courses. Reviewers should consider the factors of pre- and post-course assignments, prior work-related experience, the concentrated nature of the learning experience, and the reinforcement of the course material gained in the subsequent work setting.

## Credit Recommendations

11. Credit recommendations will be reported in the following categories:

a. *Units of Secondary Credit.* This category describes course work of the type found in programs leading to a high school diploma. Course content would usually be applicable for credit in an elective area.

b. *Vocational Certificate.* This category describes course work of the type normally found in nondegree (certificate) programs, which are usually a year or less in length and designed to provide students with occupational skills. They can also be found in some curricula leading to associate degrees in applied science. Course content is specialized, and the accompaning shop, laboratory, or similar practical components emphasize procedural rather than analytical skills.

c. *Lower Division Baccalaureate/Associate Degree.* This category describes course work of the type normally found in the first two years of a baccalaureate program and in programs leading to the Associate in Arts, the Associate in Science, or the Associate in Applied Science degrees. The instruction stresses development of analytical abilities at the introductory level. Verbal, mathematical, and scientific concepts associated with an academic discipline are introduced, as are basic principles. Occupationally oriented courses in this category are normally designed to prepare a student to function as a technician in a particular field.

d. *Upper Division Baccalaureate.* This category describes courses of the type found in the last two years of a baccalaureate program. The courses involve specialization of theoretical or analytical nature beyond the introductory level. Successful performance by students normally requires prior study in the area.

e. *Graduate Degree.* This cateogry describes courses with content of the type found in graduate programs. These courses often require independent study, original research, critical analysis, and scholarly and professional application of the specialized knowledge or discipline. Students enrolled in such courses normally have completed baccalaureate work.

12. A credit recommendation will apply retroactively to the date the course was offered substantially in the same form as seen at the review. Procedures for reporting and recording students' successful completion of the course must extend to the point to which the credit recommendation is backdated. In no case shall recommendations be made retroactive beyond 10 years from the time of review.

## Updating Recommendations

13. Credit recommendations will be kept current by the following procedures:

a. At regular intervals, a participating organization will submit information on each course for which a credit recommendation has been established. An indication of a substantive change in a course will result in an ending date being assigned to the credit recommendation. A re-evaluation will be necessary for the new course to receive a credit recommendation.

b. A credit recommendation will be valid for up to 10 years from the date of the course review, provided no substantial changes have been made in the course. At the end of this 10-year period, another onsite evaluation of the course must be conducted in order for the credit recommendation to continue to apply.

## Publications

14. In the Program publications, course review results will be reported in displays containing the following information: name of course; organization course number, when available; location; length in contact hours and days or weeks; dates covered by the recommendation; statement of objectives; description of course content and instruction; credit recommendation in the appropriate category or categories and subject area(s); and date of review.

15. For courses which are assigned credit recommendations, results will be published. Results need not be published for courses where credit recommendations are not assigned, but these must be made available if requested by affected institutions or students.

# COURSE INDEX

**Agway, Inc.**

Agway Insurance . . . . . . . . . . . . . . . . . . . . . . . .13
Agway Management Development Program . . . . . . . . . . . . . . . . . . . . . . . . . .13
Introduction to Systems Analysis . . . . . . . . . . . . .14
Life and Accident and Health Insurance . . . . . . .13
Property and Casualty Training Course . . . . . . . .13

**American Bankers Association – Stonier Graduate School of Banking**

Business Policy . . . . . . . . . . . . . . . . . . . . . . . . .15
Commercial Banking . . . . . . . . . . . . . . . . . . . . . .15
Macroeconomics . . . . . . . . . . . . . . . . . . . . . . . .15
Management of Commercial Banks . . . . . . . . . . .16
Thesis or Assigned Research Project . . . . . . . . . .16

**American Institute of Banking – Albany Chapter**

Accounting: Principles and Applications, Part One . . . . . . . . . . . . . . . . . . . . . . . . . . .20
Accounting: Principles and Applications, Part Two . . . . . . . . . . . . . . . . . . . . . . . . . . .20
Analyzing Financial Statements . . . . . . . . . . . . . .20
Bank Investments . . . . . . . . . . . . . . . . . . . . . . . .21
Bank Letters and Reports . . . . . . . . . . . . . . . . . .21
Business Administration . . . . . . . . . . . . . . . . . . .21
Credit Administration . . . . . . . . . . . . . . . . . . . . .21
Effective English . . . . . . . . . . . . . . . . . . . . . . . .21
Effective Speaking . . . . . . . . . . . . . . . . . . . . . . .21
Financing Business Enterprises . . . . . . . . . . . . . .21
Fundamentals of Bank Data Processing . . . . . . . .22
Home Mortgage Lending . . . . . . . . . . . . . . . . . . .22
Instalment Credit . . . . . . . . . . . . . . . . . . . . . . . .22
Law and Banking . . . . . . . . . . . . . . . . . . . . . . . .22
Marketing for Bankers . . . . . . . . . . . . . . . . . . . .22
Money and Banking . . . . . . . . . . . . . . . . . . . . . .22
Principles of Bank Operations . . . . . . . . . . . . . . .22
Principles of Economics . . . . . . . . . . . . . . . . . . .23
Real Estate Finance . . . . . . . . . . . . . . . . . . . . . .23
Savings Bank Organization . . . . . . . . . . . . . . . . .23
Supervision and Personnel Administration . . . . .23
Trust Functions and Services . . . . . . . . . . . . . . .23

**American Institute of Banking – Buffalo Chapter**

Accounting I (ACC 110) . . . . . . . . . . . . . . . . . . .24
Accounting II (ACC 111) . . . . . . . . . . . . . . . . . . .24
Agricultural Finance (FIN 232) . . . . . . . . . . . . . .24
Agriculture Finance (FIN 532) . . . . . . . . . . . . . . .24
Analyzing Financial Statements (ACC 212) . . . . .24
Bank Management by Objectives (MGT 304) . . . 24
Bank Public Relations and Marketing (BUS 226) . . . . . . . . . . . . . . . . . . . . . . . . . .25
BankSim (MGT 312) . . . . . . . . . . . . . . . . . . . . . .25
Business Communication by Letter and Memo (ENG 403) . . . . . . . . . . . . . . . . . . . . . . . . . .25
Business Financial Management (FIN 231) . . . . .25
Business Math (BUS 122) . . . . . . . . . . . . . . . . . .25
College Business Math (BUS 122) . . . . . . . . . . . .25
Commercial Banking (BNK 104) . . . . . . . . . . . . .25
Commercial Lending (FIN 239) . . . . . . . . . . . . . .25
Commercial Lending I & II (FIN 237 & 238) . . . . . . . . . . . . . . . . . . . . . . . . . . . . .25
Corporate Finance (FIN 531) . . . . . . . . . . . . . . . .26
Credit Administration (FIN 206) . . . . . . . . . . . . .26
Effective English for Business Communication (ENG 401) . . . . . . . . . . . . . . . . . . . . . . . . . .26
Effective Speaking (ENG 402) . . . . . . . . . . . . . . .26
Fundamentals of Bank Data Processing (BUS 123) . . . . . . . . . . . . . . . . . . . . . . . . . .26
Fundamentals of Home Mortgage Lending (FIN 230) . . . . . . . . . . . . . . . . . . . . . . . . . .26
Home Mortgage Lending (FIN 207) . . . . . . . . . . .26
Instalment Credit (FIN 236) . . . . . . . . . . . . . . . .26
Instalment Credit I (FIN 204) . . . . . . . . . . . . . . .26
Instalment Credit II (FIN 205) . . . . . . . . . . . . . . .26
International Banking (ECO 243) . . . . . . . . . . . . .27
Introduction to Bank Lending (FIN 200) . . . . . . .27
Introduction to Bank Management (MGT 303) . . . . . . . . . . . . . . . . . . . . . . . . . .27
Introduction to Business (BUS 121) . . . . . . . . . . .27
Introduction to Commercial Lending (FIN 236) . . . . . . . . . . . . . . . . . . . . . . . . . . .27
Introduction to Economics and Business (ECO 140) . . . . . . . . . . . . . . . . . . . . . . . . . .27
Law and Banking (BUS 124) . . . . . . . . . . . . . . . .27
Lending I & II (FIN 536) . . . . . . . . . . . . . . . . . . .28
Loans and Discount (FIN 203) . . . . . . . . . . . . . . .28
Management III Principles & Techniques Workshop (MGT 308) . . . . . . . . . . . . . . . . . .28
Management of Bank Funds – Bank Simulation (MGT 212) . . . . . . . . . . . . . . . . . . . . . . . . . .28
Management Policies for Commercial Banks (MGT 511) . . . . . . . . . . . . . . . . . . . . . . . . . .28
Managerial Accounting (ACC 113) . . . . . . . . . . . .28
Marketing for Bankers (BUS 205) . . . . . . . . . . . .28
Money and Banking (ECO 143) . . . . . . . . . . . . . .28
Negotiable Instruments (BUS 125) . . . . . . . . . . . .29
Practical Lending and Credit (FIN 536) . . . . . . . .29
Principles and Techniques of Management (MGT 308) . . . . . . . . . . . . . . . . . . . . . . . . . .29
Principles of Bank Operations (BNK 101) . . . . . .29
Principles of Bank Operations Advanced (BNK 104) . . . . . . . . . . . . . . . . . . . . . . . . . .29

Principles of Economics I (Macro) (ECP 141) . . . 29
Principles of Economics II (Micro) (ECO 142) . . 29
Principles of Real Estate (FIN 540) . . . . . . . . . . . 29
Principles of Real Estate Appraisal (FIN 241) . . . . . . . . . . . . . . . . . . . . . . . . . . 29
Principles of Savings Bank Operations (BNK 102) . . . . . . . . . . . . . . . . . . . . . . . . . 29
Principles of Supervision and Management (MGT 302) . . . . . . . . . . . . . . . . . . . . . . . . 30
Real Estate Appraisal (FIN 241) . . . . . . . . . . . . . . 30
Real Estate Finance (FIN 240) . . . . . . . . . . . . . . . 30
Savings and Time Deposit Banking (BNK 201) . . . . . . . . . . . . . . . . . . . . . . . . . . 30
Savings Bank Life Insurance (BNK 208) . . . . . . . . 30
Supervision and Personnel Administration (MGT 302) . . . . . . . . . . . . . . . . . . . . . . . . 30
Trust Functions and Services (BNK 206) . . . . . . . 30

**American Institute of Banking–
Nassau County Chapter**

Accounting: Principles and Applications, Part One . . . . . . . . . . . . . . . . . . . . . . . . . . 32
Accounting: Principles and Applications, Part Two . . . . . . . . . . . . . . . . . . . . . . . . . . 32
Analyzing Financial Statements . . . . . . . . . . . . . . 32
Bank Letters and Reports . . . . . . . . . . . . . . . . . . . 32
Bank Management . . . . . . . . . . . . . . . . . . . . . . . . 32
Business Mathematics . . . . . . . . . . . . . . . . . . . . . 33
Credit Administration . . . . . . . . . . . . . . . . . . . . . 33
Data Processing . . . . . . . . . . . . . . . . . . . . . . . . . 33
Economics . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 33
Effective Speaking . . . . . . . . . . . . . . . . . . . . . . . 33
Fundamentals of Bank Data Processing . . . . . . . . 33
Home Mortgage Lending . . . . . . . . . . . . . . . . . . . 33
Law and Banking . . . . . . . . . . . . . . . . . . . . . . . . . 33
Marketing for Bankers . . . . . . . . . . . . . . . . . . . . . 34
Money and Banking . . . . . . . . . . . . . . . . . . . . . . . 34
Principles of Bank Operations . . . . . . . . . . . . . . . 34
Principles of Banking . . . . . . . . . . . . . . . . . . . . . . 34
Principles of Economics . . . . . . . . . . . . . . . . . . . . 34
Psychology . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 34
Savings Bank Organization . . . . . . . . . . . . . . . . . 34
Speech/Communication . . . . . . . . . . . . . . . . . . . . 35
Supervision . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 35
Trust Functions and Services . . . . . . . . . . . . . . . . 35

**American Institute of Banking–
New York City Chapter**

Accounting Principles I . . . . . . . . . . . . . . . . . . . . 36
Accounting Principles II . . . . . . . . . . . . . . . . . . . 36
Bank Accounting . . . . . . . . . . . . . . . . . . . . . . . . . 36
Bank Audit and Internal Controls . . . . . . . . . . . . 37
Bank Data Processing Fundamentals . . . . . . . . . . 37
Bank Internal Control and Audit . . . . . . . . . . . . . 37
Basic Marketing . . . . . . . . . . . . . . . . . . . . . . . . . 37
Business Conference Speech . . . . . . . . . . . . . . . . 37
Business Law . . . . . . . . . . . . . . . . . . . . . . . . . . . 37
Business Mathematics . . . . . . . . . . . . . . . . . . . . . 38
Business Psychology . . . . . . . . . . . . . . . . . . . . . . 38
Business Writing . . . . . . . . . . . . . . . . . . . . . . . . . 38
College Mathematics for Business . . . . . . . . . . . . 38
Commercial Banking Principles . . . . . . . . . . . . . . 38
Commercial Letters of Credit . . . . . . . . . . . . . . . 38
Computer Applications and Information Systems . . . . . . . . . . . . . . . . . . . . . . . . . . . 38
Consumer Credit . . . . . . . . . . . . . . . . . . . . . . . . . 39
Consumer Credit: Behavior and Practice . . . . . . . 39
Corporate Trust Administration . . . . . . . . . . . . . 39
Corporation Accounting Principles . . . . . . . . . . . 39
Corporation Finance . . . . . . . . . . . . . . . . . . . . . . 39
Credit Administration . . . . . . . . . . . . . . . . . . . . . 39
Credit and Financial Statement Analysis . . . . . . . 40
Economic Principles . . . . . . . . . . . . . . . . . . . . . . 40
Employee Benefit Trust Administration . . . . . . . 40
English . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 40
Estate and Trust Administration . . . . . . . . . . . . . 40
Financial Statement Analysis . . . . . . . . . . . . . . . . 41
Financing International Trade . . . . . . . . . . . . . . . 41
Foreign Exchange Theory and Practice . . . . . . . . 41
Human Relations in Bank Work . . . . . . . . . . . . . 41
Human Relations in Banking . . . . . . . . . . . . . . . . 41
International Banking Operations . . . . . . . . . . . . 42
International Collections and Money Transfer . . . 42
Investment Principles . . . . . . . . . . . . . . . . . . . . . 42
Law of Commercial Instruments . . . . . . . . . . . . . 42
Law of Contracts . . . . . . . . . . . . . . . . . . . . . . . . . 42
Life Insurance . . . . . . . . . . . . . . . . . . . . . . . . . . . 42
Management Practice . . . . . . . . . . . . . . . . . . . . . 43
Management Theory and Practice . . . . . . . . . . . . 43
Marketing . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 43
Money and Banking . . . . . . . . . . . . . . . . . . . . . . . 43
Principles of Banking . . . . . . . . . . . . . . . . . . . . . . 43
Reading and Study Skills Development . . . . . . . . 44
Real Estate and Mortgage Principles . . . . . . . . . . 44
Real Estate Mortgage Principles . . . . . . . . . . . . . 44
Savings Bank Accounting . . . . . . . . . . . . . . . . . . 44
Savings Bank Life Insurance . . . . . . . . . . . . . . . . 44
Savings Bank Operations . . . . . . . . . . . . . . . . . . . 45
Savings Bank Organization . . . . . . . . . . . . . . . . . 45
Savings Banking Organization . . . . . . . . . . . . . . . 45
Speech . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 45
Trust Department Services . . . . . . . . . . . . . . . . . . 45

**American Institute of Banking–
Rochester Chapter**

Accounting I . . . . . . . . . . . . . . . . . . . . . . . . . . . . 47
Accounting II . . . . . . . . . . . . . . . . . . . . . . . . . . . 47
Analyzing Financial Statements . . . . . . . . . . . . . . 47
Bank Management . . . . . . . . . . . . . . . . . . . . . . . . 47
Basic Psychology . . . . . . . . . . . . . . . . . . . . . . . . . 47

Business Administration . . . . . . . . . . . . . . . . . . . . 48
Business Communication by Letter and Memo . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 48
Business Financial Management . . . . . . . . . . . . . 48
Business Math . . . . . . . . . . . . . . . . . . . . . . . . . . . . 48
Business Psychology . . . . . . . . . . . . . . . . . . . . . . . 48
Credit Administration . . . . . . . . . . . . . . . . . . . . . 48
Effective English for Business Communication . . . . . . . . . . . . . . . . . . . . . . . 49
Instalment Credit I . . . . . . . . . . . . . . . . . . . . . . . . 49
Instalment Credit II . . . . . . . . . . . . . . . . . . . . . . . 49
Law and Banking . . . . . . . . . . . . . . . . . . . . . . . . . 49
Marketing for Bankers . . . . . . . . . . . . . . . . . . . . . 49
Money and Banking . . . . . . . . . . . . . . . . . . . . . . . 49
Negotiable Instruments . . . . . . . . . . . . . . . . . . . . . 49
Principles of Bank Operations . . . . . . . . . . . . . . . 49
Principles of Banking . . . . . . . . . . . . . . . . . . . . . . 49
Principles of Economics . . . . . . . . . . . . . . . . . . . . 50
Savings Bank Organization . . . . . . . . . . . . . . . . . 50
Security Analysis . . . . . . . . . . . . . . . . . . . . . . . . . 50
Supervision and Personnel Administration . . . . . 50
Supervision: Concepts and Principles . . . . . . . . . 50
Trust Function and Services . . . . . . . . . . . . . . . . 50

**American Institute of Banking – Westchester County Chapter**

Accounting I . . . . . . . . . . . . . . . . . . . . . . . . . . . . 51
Advanced Effective English . . . . . . . . . . . . . . . . 51
Analyzing Financial Statements I . . . . . . . . . . . . 51
Basic Psychology . . . . . . . . . . . . . . . . . . . . . . . . . 51
Business Administration . . . . . . . . . . . . . . . . . . . . 51
Business Mathematics . . . . . . . . . . . . . . . . . . . . . 52
Business Writing . . . . . . . . . . . . . . . . . . . . . . . . . 52
Credit Administration . . . . . . . . . . . . . . . . . . . . . 52
Effective English . . . . . . . . . . . . . . . . . . . . . . . . . 52
Effective English, Accelerated . . . . . . . . . . . . . . 52
Effective Speaking . . . . . . . . . . . . . . . . . . . . . . . . 52
Fundamentals of Bank Data Processing . . . . . . . . 52
Human Relations Development . . . . . . . . . . . . . 52
Instalment Credit . . . . . . . . . . . . . . . . . . . . . . . . . 53
International Banking . . . . . . . . . . . . . . . . . . . . . 53
Introduction to Computers . . . . . . . . . . . . . . . . . 53
Law and Banking . . . . . . . . . . . . . . . . . . . . . . . . . 53
Macroeconomics . . . . . . . . . . . . . . . . . . . . . . . . . 53
Management Psychology . . . . . . . . . . . . . . . . . . . 53
Marketing for Bankers . . . . . . . . . . . . . . . . . . . . . 54
Money and Banking . . . . . . . . . . . . . . . . . . . . . . . 54
Negotiable Instruments . . . . . . . . . . . . . . . . . . . . . 54
Oral Communications for Bankers . . . . . . . . . . . . 54
Principles of Auditing . . . . . . . . . . . . . . . . . . . . . 54
Principles of Bank Operations . . . . . . . . . . . . . . . 54
Principles of Savings Bank Operations . . . . . . . . . 55
Real Estate Finance I . . . . . . . . . . . . . . . . . . . . . . 55
Savings Bank Life Insurance I . . . . . . . . . . . . . . . 55
Supervision and Personnel Administration . . . . . 55
Techniques for Modern Management . . . . . . . . . 55
Trust Functions and Services . . . . . . . . . . . . . . . . 55

**American Institute for Creative Living**

Adolescent and Adult Development . . . . . . . . . . 17
Advanced Group Dynamics I . . . . . . . . . . . . . . . . 17
Advanced Group Dynamics II . . . . . . . . . . . . . . . 17
Basic Interviewing Skills . . . . . . . . . . . . . . . . . . . 17
Counseling the Addictive Person . . . . . . . . . . . . . 18
Counseling the Adolescent . . . . . . . . . . . . . . . . . . 18
Counseling the Child . . . . . . . . . . . . . . . . . . . . . . . 18
Counseling the Couple . . . . . . . . . . . . . . . . . . . . . 18
Counseling the Elderly . . . . . . . . . . . . . . . . . . . . . 18
Counseling the Family . . . . . . . . . . . . . . . . . . . . . 18
Counseling the Family and Couple . . . . . . . . . . . 18
Infant and Child Development . . . . . . . . . . . . . . . 19
Introduction to Cognitive and Behavioral Approaches to Counseling . . . . . . . . . . . . . . 19
Introduction to Group Dynamics I . . . . . . . . . . . 19
Introduction to Group Dynamics II . . . . . . . . . . . 19
Psychopathology I . . . . . . . . . . . . . . . . . . . . . . . . 19
Psychopathology II . . . . . . . . . . . . . . . . . . . . . . . 19

**American Jewish Committee**

The American Jewish Experience in Literature (10) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 56
Biblical Thought (2) . . . . . . . . . . . . . . . . . . . . . . . 56
Bioethical Issues in the Rabbinic Tradition (7) . . . 56
Foundations of Judaism (1) . . . . . . . . . . . . . . . . . 56
Hasidism (6) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 56
History of American Jewry (8) . . . . . . . . . . . . . . 57
Jewish-Christian Encounter (5) . . . . . . . . . . . . . . 57
Modern Jewish Thought (4) . . . . . . . . . . . . . . . . 57
Talmudic Thought (3) . . . . . . . . . . . . . . . . . . . . . . 57
Zionism: History and Ideology (9) . . . . . . . . . . . . 57

**The American Legion Department of New York**

Boys' State Program of New York . . . . . . . . . . . 58

**American Telephone and Telegraph Company**

Accounting Problems and Practices in Public Utilities . . . . . . . . . . . . . . . . . . . . . . . . 61
Computer Principles . . . . . . . . . . . . . . . . . . . . . . . 60
Data Switching Concepts . . . . . . . . . . . . . . . . . . . 60
Engineering Economy Applications to Public Utilities . . . . . . . . . . . . . . . . . . . . . . . . 62
Finance . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 62
Forkner Shorthand Program . . . . . . . . . . . . . . . . 59
Human Resources—Training and Education . . . . 60
Managerial Economics, Rate Structure, and Pricing in Public Utilities . . . . . . . . . . . . . . . 61
Marketing and Sales Principles . . . . . . . . . . . . . . 61

Marketing for AT&T Sales and Marketing Officials . . . 60
Performance Analysis Workshop . . . 60
Secretarial Seminar . . . 59
Special Program in Engineering Economy for Public Utilities . . . 61
Training and Orientation Program for Secretaries . . . 59
Typing Skills Training . . . 59
Women: Doing the Management Job . . . 60

**American Telephone and Telegraph Company–Long Lines**

Advanced Human Potential Seminar . . . 64, 65
Basic Assembler Language Workshop . . . 67
Basic Human Potential Seminar . . . 64
Basic OS Utilities (L110) . . . 67
Communications Workshop (H101) . . . 63
Consideration for Physical Data Design (L760) . . . 67
Effective Reading Seminar . . . 65
Effective Speaking Seminar (H116) . . . 65
Effective Writing Styles . . . 65
Human Resource Center—White Plains . . . 63
IBM Information Management System (IMS/VS) Applications . . . 67
IBM Information Management System (IMS/VS) Data Communications . . . 67
IBM OS JCL and Utilities . . . 68
IMS Batch Coding (L451) . . . 68
IMS Data Base Utilities (L457) . . . 68
IMS Data Communications Coding (L452) . . . 68
IMS Debugging (L453) . . . 68
IMS Message Format Service (L455) . . . 68
IMS Utilities (L457) . . . 68
Initial Programmer Training (L001) . . . 69
Intercomm Workshop (L401) . . . 69
Introduction to Teleprocessing and the 3270 Information Display System (L395) . . . 69
Introduction to Teleprocessing and the Dataspeed 40 (L395) . . . 69
Labor Relations (H115) . . . 63, 65
Linkage Editor (L030) . . . 69
Management Resource Center—New York City . . . 64
Managers Orientation Conference (H220) . . . 63, 65
Managing at the First Level (H136) . . . 63, 66
Managing Managers (H210) . . . 63, 66
New Supervisory Training (H105) . . . 64, 66
New Supervisory Training (M105) . . . 64, 66
OS/VS2 Concepts (L150) . . . 69
OS/370 JCL (L108) . . . 69
Project Management (Y300) . . . 69
Systems Analysis and Design . . . 69
Systems and Technical Education Center—Piscataway . . . 67
Total Systems Development Concepts (Y120) . . . 69
TSO (L020) . . . 69
Vocational Instructor Training (E116) . . . 66
Workshop in Problem Solving . . . 66

**AMF, Incorporated**

Accounting and Finance for Non-Financial Managers . . . 70

**Arnot-Ogden Memorial Hospital**

Clinical Practicum I, II, III, and IV . . . 71
Introduction to Radiologic Technology and Medical Ethics . . . 71
Medical and Surgical Diseases . . . 71
Medical Terminology . . . 71
Methods of Patient Care . . . 72
Nuclear Medicine . . . 72
Pediatric Radiography . . . 72
Principles of Radiographic Exposure I . . . 72
Principles of Radiographic Exposure II . . . 72
Quality Assurance . . . 72
Radiation Biology . . . 73
Radiation Physics . . . 73
Radiation Protection . . . 73
Radiographic Film Evaluation I . . . 73
Radiographic Film Evaluation II . . . 73
Radiographic Procedures I . . . 73
Radiographic Procedures II . . . 73
Radiographic Processing . . . 74
School of Radiologic Technology . . . 71
Special Procedures . . . 74
Topographic Anatomy . . . 74

**Arthur Andersen & Co.**

Firmwide Audit Staff Training School (FASTS) . . . 75
Integration of Intermediate and Advanced Accounting with Auditing . . . 75

**Bernard Fineson Developmental Center**

Activities of Daily Living (7) . . . 76
Behavior Modification for Professionals (9) . . . 76
Behavior Modification Techniques (6) . . . 76
Behavior Therapy (10) . . . 76
The Cerebral Palsied Mentally Retarded and Physically Handicapped Individual (3) . . . 76
Community Living for Retarded Adults (8) . . . 76
Current Theory in Severe and Profound Mental Retardation: Survey for Professionals (2) . . . 77

Current Theory in the Disorder of the Severe and Profound Mentally Retarded Individual (2) . . . . . . . . 77
Habilitation of the Cerebral Palsied Mentally Retarded and Physically Handicapped Individual (3) . . . . . . . . 77
The Interdisciplinary Treatment Plan for Direct Care Personnel Working with the Severely and Profound Mentally Retarded Client (4) . . . . . . . . 77
The Interdisciplinary Treatment Plan for Direct Care Personnel Working with the Severely and Profoundly Retarded Individual (4) . . . . . . . . 77
The Interdisciplinary Treatment Plan: Overview for Professionals of Current Approaches in the Interdisciplinary Management of Severely and Profoundly Mentally Retarded Individuals (5) . . . . . . . . 78
The Interdisciplinary Treatment Team: Overview for Professionals of Current Approaches in the Interdisciplinary Management of Severely and Profoundly Mentally Retarded Individuals (5) . . . . . . . . 78
Introduction to Therapeutic Recreation—Field Practicum . . . . . . . . 78
Preparation in Community Living for Retarded Adults (8) . . . . . . . . 78
Seminar for Family Caretakers . . . . . . . . 78
Training for Professional Staff . . . . . . . . 78

**Biological Photographic Association, Inc.**

Certification Program for Registered Biological Photographers . . . . . . . . 80

**Blue Cross and Blue Shield of Greater New York**

Assembly Programming (DP04) . . . . . . . . 81
BAL (DP04) . . . . . . . . 81
COBOL Programming (DP01) . . . . . . . . 81
MVS Dumps and Debugging (DP03) . . . . . . . . 81
MVS JCL and Utilities (DP02) . . . . . . . . 81
OS JCL and Utilities (DP02) . . . . . . . . 82
OS/VS Dumps and Debugging (DP03) . . . . . . . . 82

**Booth Memorial Medical Center**

Management Development for Department Heads and Supervisors . . . . . . . . 83

**Broome Developmental Services**

Administration of Medications . . . . . . . . 84
Nature and Needs of the Mentally Retarded . . . . 84

**Center for Human Services Training, Inc.**

Approaches to Problem Solving (210) . . . . . . . . 85
Community Resources (207) . . . . . . . . 85
Introduction to Community Mental Health (203) . . . . . . . . 85
Introduction to Crisis Intervention (204) . . . . . . . . 85
Introduction to Group Work (205) . . . . . . . . 85
Introduction to Human Services . . . . . . . . 85
Introduction to Interviewing (201) . . . . . . . . 85
Introduction to Mental Health Services . . . . . . . . 85
Life-Span Development (208) . . . . . . . . 85
Perspectives on Ethnicity . . . . . . . . 85

**Central Islip Psychiatric Center**

Medication Certification Program . . . . . . . . 86

**Central Labor Rehabilitation Council of New York, Inc.**

Basic Union Peer Counseling . . . . . . . . 87
Course for Union Officers in Occupational Substance Abuse . . . . . . . . 87
Introduction to Substance Abuse Counseling in the Workplace . . . . . . . . 87
Labor's Role in Employee Alcoholism Programs . . . . . . . . 87
Occupational Safety and Health . . . . . . . . 88
Problem Youth: An Interpretive and Services Approach . . . . . . . . 88
Survey of Substance Abuse Programs in the Workplace . . . . . . . . 88
Union Drug Counselor Training Program . . . . . . 88

**Charles S. Wilson Memorial Hospital**

Airways Management (RT 104) . . . . . . . . 89
Basic Sciences (RT 102) . . . . . . . . 89
Cardiopulmonary Anatomy and Physiology (RT 103) . . . . . . . . 89
Cardiopulmonary Physiology . . . . . . . . 89
Cardiopulmonary Resuscitation (RT 106) . . . . . . 90
Clinical Medicine (RT 111) . . . . . . . . 90
Clinical Rotation (RT 121-128) . . . . . . . . 90
Gas, Humidity, and Aerosol Therapy (RT 109) . . 90
Human Anatomy and Physiology (RT 101) . . . . . 90
Human Biological Science . . . . . . . . 90
Microbiology (RT 105) . . . . . . . . 90
Patient Care (RT 112) . . . . . . . . 91
Pharmacology (RT 107) . . . . . . . . 91
Prolonged Mechanical Ventilation (RT 108) . . . . 91
Pulmonary Physical Therapy (RT 110) . . . . . . . . 91

Respiratory Techniques . . . . . . . . . . . . . . . . . . . . 91
School for Respiratory Therapy Technicians . . . . 89

**Chautauqua Institution**

Art Center . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 92
Ballet IA, IIA, IB, IIB . . . . . . . . . . . . . . . . . . . . 94
Bass, String (M270, M240) . . . . . . . . . . . . . . . . . 96
Bass Clarinet (M241) . . . . . . . . . . . . . . . . . . . . . 96
Bassoon (M271, M242) . . . . . . . . . . . . . . . . . . . . 96
Cello (M272, M273, M243, M244) . . . . . . . . . . . . 96
Ceramic Sculpture (A781) . . . . . . . . . . . . . . . . . 92
Ceramics and Jewelry/Metals . . . . . . . . . . . . . . . 92
Chamber Music Group I (M201A, M202) . . . . . . 95
Chamber Music Group II (M201B, M203) . . . . . . 95
Chamber Music Workshop (M201C, M204) . . . . . 95
Clarinet (M275, M246) . . . . . . . . . . . . . . . . . . . . 96
Dance Department D300 . . . . . . . . . . . . . . . . . . 94
Diction for Singers . . . . . . . . . . . . . . . . . . . . . . . 95
Flute (M276, M278, M247-M249) . . . . . . . . . . . . 96
French (M234A, M221F) . . . . . . . . . . . . . . . . . . . 95
German (M234B, M221G) . . . . . . . . . . . . . . . . . . 95
Harp (M279, M280, M252) . . . . . . . . . . . . . . . . . 96
Horn (M281, M253) . . . . . . . . . . . . . . . . . . . . . . 96
Interpretation Classes (M213) . . . . . . . . . . . . . . 95
Italian (M234C, M221I) . . . . . . . . . . . . . . . . . . . 95
Master Classes (M214) . . . . . . . . . . . . . . . . . . . . 95
Modern Dance IA, IIA, IB, IIB . . . . . . . . . . . . . . 94
Music School Festival Orchestra (M201) . . . . . . . 95
Oboe (M282, M255) . . . . . . . . . . . . . . . . . . . . . . 96
Opera-Musical Theatre Workshop (M222) . . . . . . 95
Opera Workshop (M232, M222) . . . . . . . . . . . . . 96
Orchestral Instruments-Individual Instruction . . . 96
Organ—Individual Instruction (M254, M237) . . . 96
Painting and Drawing . . . . . . . . . . . . . . . . . . . . . 93
Percussion (M283, M256) . . . . . . . . . . . . . . . . . . 96
Piano—Individual Instruction (M221-M223,
  M207-209) . . . . . . . . . . . . . . . . . . . . . . . . . . 96
Piano Literature . . . . . . . . . . . . . . . . . . . . . . . . . 96
Saxophone (M284, M257) . . . . . . . . . . . . . . . . . . 96
School of Music . . . . . . . . . . . . . . . . . . . . . . . . . 95
Sculpture (A780, A782) . . . . . . . . . . . . . . . . . . . 93
Special Interest Offerings . . . . . . . . . . . . . . . . . . 97
Survey of Vocal Literature (M233, M223) . . . . . . 97
Theatre Department . . . . . . . . . . . . . . . . . . . . . . 98
Theatre School (T500) . . . . . . . . . . . . . . . . . . . . 98
Timpani (M289, M262) . . . . . . . . . . . . . . . . . . . . 96
Trombone (M285, M258, M259) . . . . . . . . . . . . . 96
Trumpet (M287, M260) . . . . . . . . . . . . . . . . . . . . 96
Tuba/Bass Trombone (M288, M261) . . . . . . . . . . 96
Viola (M290-M293, M298, M263-M267) . . . . . . . 96
Violin (M294-M297, M268-M271) . . . . . . . . . . . . 96
Voice—Individual Instruction (M237-M239,
  M217-M219) . . . . . . . . . . . . . . . . . . . . . . . . . 97
Weaving (A720-A725) . . . . . . . . . . . . . . . . . . . . . 93
Writers' Workshop (483P-F, S470, S468) . . . . . . . . 97

**Chenango County CETA Program**

Work 101 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 386

**City of Albany Department of Human Resources**

Electronic Servicing . . . . . . . . . . . . . . . . . . . . . . 387
Life Management Skills . . . . . . . . . . . . . . . . . . . 387
Office Occupations/Shorthand . . . . . . . . . . . . . . 387
Office Occupations/Typewriting . . . . . . . . . . . . . 388

**City of Buffalo Department of Human Resources, Division for Employment and Training**

Allentown Community Center: Youth
  Employment and Training Program . . . . . . 389
Office Careers . . . . . . . . . . . . . . . . . . . . . . . . . . 389
Techniques of Field Video Production . . . . . . . . 389

**City of Rochester Office of Employment and Training**

Advancement Through Clerical Techniques . . . 390
Bilingual Health Training Program . . . . . . . . . . 390
Language Skills I . . . . . . . . . . . . . . . . . . . . . . . . 390
Language Skills II . . . . . . . . . . . . . . . . . . . . . . . 390
Skilled Machinist Training . . . . . . . . . . . . . . . . . 390
Typing and Clerical Office Procedures . . . . . . . 391

**City of Yonkers Office of Employment and Training**

Auto Body Repair . . . . . . . . . . . . . . . . . . . . . . . 392
Automotive Repair . . . . . . . . . . . . . . . . . . . . . . . 392
Bookkeeping . . . . . . . . . . . . . . . . . . . . . . . . . . . 392
Bookkeeping I and II . . . . . . . . . . . . . . . . . . . . . 392
Business Communications . . . . . . . . . . . . . . . . . 392
Business English . . . . . . . . . . . . . . . . . . . . . . . . 392
Business Math . . . . . . . . . . . . . . . . . . . . . . . . . . 393
Business Math I and II . . . . . . . . . . . . . . . . . . . . 393
Correspondence I and II . . . . . . . . . . . . . . . . . . 392
Electronics Occupations . . . . . . . . . . . . . . . . . . . 393
Health Services Occupations . . . . . . . . . . . . . . . 393
Metal Machining Occupations . . . . . . . . . . . . . . 393

**City of Yonkers Police Department**

Criminal Investigation . . . . . . . . . . . . . . . . . . . . . 99
Incentive Training Program . . . . . . . . . . . . . . . . . 99

**Consolidated Edison Company of New York, Inc.**

Advanced Automotive and Truck Technology
  (8777) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 111

Advanced Power Plant Operator (PS-003) ..... 105
Air Conditioning (8702) ..... 111
Assessor Training Workshop (MD-13, HRIS-8502) ..... 102
Atomic-Nuclear Physics (02) ..... 100, 101
Basic Automotive Technology (8704) ..... 111
Basic Blueprint Reading (8708) ..... 111
Basic Electrical and Mechanical Blueprint Reading ..... 105
Basic Electricity (8718) ..... 111
Basic Power Plant Operator (PS-001) ..... 105
Basic Regulator and Control (PS-058) ..... 105
Basic Train the Trainer Workshop ..... 113
Basic Typing (ST 1.101) ..... 108
Basics in Business Mathematics (ST 1.501) ..... 108
Building and Heating Ventilation (8770) ..... 111
Business Mathematics (ST 1.511) ..... 108
Caterpiller Diesel Engine (8754) ..... 112
Clear Concise Business Writing (HRIS-8819) ..... 103
Communication (MD-3, HRIS-8506) ..... 103
Communication Arts for Business (ST 1.611) ..... 108
Communications Workshop (HRIS-8506) ..... 103
Conflict Management (MD-3) ..... 103
Conflict Management Workshop—Phase I (HRIS-8508) ..... 103
Control Room Procedures (PS-004B) ..... 105
Cummins Diesel Engine (8756) ..... 112
Detroit Diesel Engine (8714) ..... 112
Effective Writing Workshop (STC 11,8100) ..... 103
Electric Ignition Systems (8757) ..... 112
Electrical Fundamentals (PS-046) ..... 105
Fire Prevention and Protection ..... 106
Fleet Maintenance Management (8724) ..... 112
Fluid Mechanics (06) ..... 100
Fuel Conservation Program (8726) ..... 112
Fundamentals of Accounting (ST 1.411) ..... 109
Gasoline Engine Tune-Up (8775) ..... 112
Heat Transfer (07) ..... 100
Indian Point Station—Simulator/Energy Education Center ..... 100
Industrial Hygiene ..... 106
Instructional Methods ..... 113
Instrument and Control Basic Course (PS-052) ..... 106
Instrument and Control Intermediate Course (PS-053) ..... 106
Intermediate Electrical (PS-047) ..... 106
Intermediate Power Plant Operator (PS-002) ..... 106
Interviewing Skills Workshop ..... 103
Job Instruction Training (PS-067-1) ..... 106
Leadership Training ..... 103
Mack Diesel Engine (8760) ..... 112
Management and Professional Development Group ..... 102
Management of Managers ..... 103
Management Practices for Experienced Supervisors ..... 104
Management Skills Training—Phase I (MD-8, HRIS-8550) ..... 104
Management Skills Training—Phase II (MD-8, HRIS-8552) ..... 104
Managing Your Time ..... 104
Mobile Hydraulics (8730) ..... 112
Motivation Workshop (MD-6, HRIS-8558) ..... 104
Motor and Motor Controls (PS-047-1) ..... 107
Nuclear Power Plants I: Primary and Secondary Systems ..... 100
Nuclear Power Plants II: Control Systems ..... 100
Office Procedures (ST 1.311) ..... 109
Package Boilers (PS-015B) ..... 107
Performance Appraisal Program (MD-11, HRIS-8562) ..... 104
Pneumatic Technology (8778) ..... 112
Power Supply Training Center ..... 105
Presentation Skills ..... 104
Problem Solving Workshop (MD-18, HRIS-8566) ..... 104
Radiation Protection (03) ..... 101
Reactor Theory (04) ..... 101
Signature Analysis ..... 107
Simulator Training (31) ..... 101
Specialized Training ..... 108
Stenography I (ST 1.211) ..... 109
Stenography II (ST 1.212) ..... 109
Stenoscript ABC Shorthand (ST 1.201) ..... 110
Survey of Nuclear Engineering ..... 101
Technical Training Center ..... 111
Thermal-Hydraulics of Nuclear Power Plants ..... 102
Thermodynamics (05) ..... 102
Training Resources Group ..... 113
Typing I (ST 1.111) ..... 110
Typing II (ST 1.112) ..... 110

**Contact–Syracuse, Inc.**

Listening Skills for Telephone Counseling ..... 114

**Corning Glass Works**

Basic Glass Technology ..... 115
Effective Presentations (8025) ..... 115
Exceptional Administrative Skills (8412) ..... 115
Glass Technology (5050) ..... 115
Managerial Grid Seminar (8630) ..... 115
Rational Problem Solving ..... 116
Strength of Brittle Materials (5015) ..... 116

**Craig Developmental Center**

Medication Administration for Approved Medication Administration Personnel (B-2-10) . . . 117

**Culinary Institute of America**

Associates Educational Skills Seminar . . . 118

**Delaware County Employment and Training Administration**

Work 101 . . . 394

**District Council 37, American Federation of State, County and Municipal Employees, AFL-CIO**

Communication Within the Helping Role (IM-4) 119
Disadvantaged Urban Population (IM-2) . . . 119
Roots of the New York City Welfare System: Conflicts, Ideas, and Policies (IM-1) . . . 119
Selected Programs and Procedures of the Human Resources Administration in New York City (IM-3) . . . 119

**Eastern Massachusetts Association of Land Surveyors, Inc.**

Advanced Surveying Math I (A-1) . . . 121
Advanced Surveying Math II (A-2) . . . 121
Drainage for Surveyors (D) . . . 121
Intermediate Surveying I (I-1C) . . . 121
Intermediate Surveying II (I-2C) . . . 121
Photogrammetry (P-1C) . . . 122

**Eastman Kodak Company**

Effective Education Seminar . . . 123
Fundamentals of Computer Programming . . . 123
Fundamentals of Computers and Data Processing . . . 123
Fundamentals of Optical Engineering . . . 123
Instructional Process Workshop . . . 123
Photographic Science for New Professional Technical People . . . 124
Photographic Technology I . . . 124
Practical Optics . . . 124
Technical Mathematics I . . . 124
Technical Mathematics II . . . 124

**Ebasco Services Incorporated**

Basic Planning and Scheduling With CPM (MS-2) . . . 126
The Ebasco Project Management System (MS-4) . . . 126
The Ebasco Scheduling System (MS-3) . . . 126
Effective Oral Presentations (PD-1) . . . 126
Effective Time Management (MD-7) . . . 126
Labor Relations (MS-6) . . . 127
Management of Meetings (MD-13) . . . 127
Objectives, Priorities, and Planning (MD-9). . . . 127
Performance Feedback and Appraisal (MD-1) . . 127
Report Writing (PD-4) . . . 127
Selection Interviewing and College Recruiting (MS-7) . . . 127
Selection Interviewing for Supervisors (MS-10) . . . 127
Supervisory Development Program (MD-10) . . . 128
Task Force Problem Solving (MD-8) . . . 128
Workshop in English Composition (PD-8) . . . 128
Written Business English (PD-6) . . . 128

**Embroiderers' Guild of America, Inc.**

Foundation in Color . . . 129
Teachers' Certification Program in Selected Areas (Blackwork, Canvaswork, Crewel, Embroidery as a Contemporary Expression, Pulled Thread, Quilting, Silk and Metal, and Stumpwork) . . . 129

**Equitable Life Assurance Society of the United States**

Advanced Job Control Language and Utilities . . . 130
ANS COBOL Coding and Workshop . . . 130
Data Processing Concepts . . . 130
Introduction to Data Processing . . . 130
Introduction to Job Control Language . . . 130
Job Control Language and Utilities . . . 130
Program Logic Through Flowcharting . . . 131
Systems Analysis Techniques . . . 131

**Federal Aviation Administration**

Advanced ILS/VOR Principles (40204) . . . 133
Air Conditioning (40114 and 44106) . . . 133
Air Traffic Control Specialist . . . 132
Airport Surveillance Radar, ASR-8 (40333) . . . 133
Airway Facilities Training Program . . . 132
AN/GRN-27 (Category II ILS) (40232) . . . 133
AN/TPX-42 (40366) . . . 133
Approach Light Systems (40124) . . . 134
ARTCC Boilers (43439) . . . 134
ARTCC Environmental Conditioning and Controls (43438) . . . 134
ARTCC Heavy Duty Air Conditioning (43440) . . . 134

ARTCC Standby Power and Distribution System (43449) . . . . . . . . . . . . . . . . . . . . . . 134
ARTS-II for Supervisors (42015) . . . . . . . . . . . . 135
ARTS III for Supervisors (42033) . . . . . . . . . . . . 135
ARTS-II for Technicians (42006) . . . . . . . . . . . . 135
ARTS III for Technicians (42004) . . . . . . . . . . . 135
ARTS III Technician Update (42005 and 44413) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 135
ASR-4/5/6 System (40304) . . . . . . . . . . . . . . . . . 136
ATCBI-3 Transmitter/Receiver/Indicator Sites (40318) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 136
ATCBI-5 (40339) . . . . . . . . . . . . . . . . . . . . . . . . 136
Automatic Program Unit Low Speed (40004) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 136
Back-Up Emergency Communications System ARTCC (40009) . . . . . . . . . . . . . . . . . . . . 136
Bright Radar Indicator Tower Equipment, BRITE-1 (40311) . . . . . . . . . . . . . . . . . . . . 137
Bright Radar Indicator Tower Equipment (BRITE-2/4) (40327) . . . . . . . . . . . . . . . . . . 137
BRITE Numerics (TPX-42) (40367) . . . . . . . . . . 137
Cable Fault Analysis (40121) . . . . . . . . . . . . . . . 137
CDC Display for Technicians (43426) . . . . . . . . . 137
Central Control and Monitoring System (CCMS) Maintenance (43472) . . . . . . . . . . . 138
Coded Time Source (43001) . . . . . . . . . . . . . . . . 138
Common Digitizer AN/FYQ-49 (43402) . . . . . . . 138
Common Digitizer Height AN-FYQ-47 (43404) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 138
Communications Equipment (40007) . . . . . . . . . 139
Computer Display Channel for Engineers (43418) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 139
Computer Display Channel Software (43451) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 139
Computer Update Equipment (43416) . . . . . . . . 139
Data Receiving Group (DRG) Inter-Facility Data Set (IFDS) (43417) . . . . . . . . . . . . . . . 139
DCC Software (43452) . . . . . . . . . . . . . . . . . . . . 139
Diesel Engine Generators (44102) . . . . . . . . . . . 140
Digital Logic Principles (40402) . . . . . . . . . . . . . 140
Display Channel Complex for Engineers (43431) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 140
Doppler VOR System (40207) . . . . . . . . . . . . . . . 140
Electrical Principles (40100) . . . . . . . . . . . . . . . . 140
Electrical Principles—Phase II (40126) . . . . . . . 141
Electronic Fundamentals and Engineering Mathematics (44504) . . . . . . . . . . . . . . . . . . 141
En Route Flight Advisory Service (50201) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 153
En Route Radar System ARSR-1/2 (40307) . . . . . 141
Engine and Control Panels (40127) . . . . . . . . . . . 141
Engine Generator Control Devices (40128) . . . . 142
Environmental Support System Concepts (40117) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 142
Environmental Systems and Controls (40133) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 142
550-KW Diesel Engine Generators (40116) . . . . 140
550-KW Diesel Engine Generators (40129) . . . . 142
Flight Data Entry and Printout (44407) . . . . . . . 142
Flight Data Entry and Printout Equipment (43409) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 143
Flight Service Operations (50223) . . . . . . . . . . . . 154
Flight Service Station Training Program . . . . . . 153
Foundation Mathematics (44502) . . . . . . . . . . . . 143
Fundamentals of Air Traffic Control (50222) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 154
Gasoline and Diesel Engine Generators (40118) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 143
Goes Satellite Weather Data (50206) . . . . . . . . . 154
Heating, Ventilation, and Air Conditioning (40132) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 143
High Capacity Voice Recorder (HVCR) (40016) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 143
IBM 2314-A1 Direct Access Storage Facility (43437) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 143
IBM 9020 A/D PAM and System Control (43460) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 144
IBM 9020 CCC for Engineers (43463) . . . . . . . . 144
IBM 9020 D/E Processing (43462) . . . . . . . . . . . 144
IBM 9020 E Option Specialty (43430) . . . . . . . . . 144
IBM 9020 Input/Output Equipment (43459) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 144
IBM 9020 Peripheral Devices (43457) . . . . . . . . . 145
IBM 9020 System Familiarization and BAL Programming (43458) . . . . . . . . . . . . . . . . . 145
ILS (AIL Mark Ib) (40236) . . . . . . . . . . . . . . . . 145
ILS Capture Effect Glide Slope (40420) . . . . . . . 145
ILS Concepts (40233) . . . . . . . . . . . . . . . . . . . . . 145
ILS Problem Analysis (40246) . . . . . . . . . . . . . . . 146
ILS (Tube Type) (40234) . . . . . . . . . . . . . . . . . . 146
ILS (Wilcox Mark Ia) (40235) . . . . . . . . . . . . . . . 146
Introduction to the IBM 9020 Central Computer Complex (44404) . . . . . . . . . . . . . 146
IOPB (42007) . . . . . . . . . . . . . . . . . . . . . . . . . . . 146
JOVIAL Programming (43464) . . . . . . . . . . . . . . 146
Model 29/35 Teletype Equipment (40012) . . . . . 147
Multi-Channel Recorders (43600 and 44002) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 147
NAS En Route Automation I/O Equipment for Engineers (43412) . . . . . . . . . . . . . . . . . . . . 147
NAS En Route Operational Program for Engineers (43420) . . . . . . . . . . . . . . . . . . . . 147
Pilot Briefing Refresher (55202) . . . . . . . . . . . . . 154
Pilot Briefing Training (50205) . . . . . . . . . . . . . . 154
Positions Qualification/Facility Certification (55224) . . . . . . . . . . . . . . . . . . 155
Power Conditioning System (40131) . . . . . . . . . . 147
Power Conditioning System (43433) . . . . . . . . . . 148
Principles of Digital Logic and Data Processing (44411) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 148
Radar Bright Display Equipment, RBDE-6 (40324) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 148

Radar Data Acquisition System (43400) . . . . . . . 148
Radar Microwave Link System RML 1/2/3/4 (RML-T/R) (40322) . . . . . . . . . . . . . . . . . . 148
Radar Principles A (40329) . . . . . . . . . . . . . . . . . 149
Radar Principles B (40330) . . . . . . . . . . . . . . . . . 149
RDP Operational Programming (43450) . . . . . . . 149
Rho-Theta Monitor Equipment, RTC-2 (40238) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 149
Rho-Theta Monitor Equipment, RTC-3 (40221) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 149
Rho-Theta Navigation Equipment, GRN-9 (40239, 44207, and 43700) . . . . . . . . . . . . . . 150
Rho-Theta Navigation Equipment, RTB-2 (40237) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 150
Rho-Theta (TACAN) Principles (40200) . . . . . . . 150
RML RF Retune (40346) . . . . . . . . . . . . . . . . . . 150
Runway Visual Range Equipment, TRA System (40229) . . . . . . . . . . . . . . . . . . . . . . 151
Runway Visual Range Equipment, Type FA-7861 (40213) . . . . . . . . . . . . . . . . . . . . . . 151
Sensor, Receiver, and Processor (SRAP) (42010) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 151
SMMC for Engineers (43421) . . . . . . . . . . . . . . . 151
Solid State Devices (44712 and 44509) . . . . . . . . 152
Solid State Fundamentals for Electromechanics (40155 and 44107) . . . . . . . . . . . . . . . . . . . . 152
Standby Power and Distribution Panel (40130) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 152
System Maintenance Monitor Console (43432) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 152
Test Equipment Console Test Cart (43419) . . . . . 152
VHF Omnirange Equipment (VOR) (40205) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 152
Visual Approach Slope Indicators (Solid State) (40125) . . . . . . . . . . . . . . . . . . 153
Visual Landing Aids System (40123) . . . . . . . . . . 153

**Federal Reserve Bank of New York**

Beginning Stenography (Stenoscript) (FA-140) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 156
Beginning Typing (FA-135) . . . . . . . . . . . . . . . . 156
Refresher Stenography (FA-141) . . . . . . . . . . . . . 156
Refresher Typing (FA-136) . . . . . . . . . . . . . . . . . 156
Stenography Review (FA-141) . . . . . . . . . . . . . . . 157

**General Dynamics Corporation, Electric Boat Division**

Basic Digital Techniques . . . . . . . . . . . . . . . . . . . 158
Introduction to Microprocessor Concepts (INTEL 8080/8085) . . . . . . . . . . . . . . . . . . . 158
Microprocessor Concepts (RCA-1802) . . . . . . . . 158
Using Computers to Manage . . . . . . . . . . . . . . . 158

**General Electric Company**

A-Course . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 159
Advanced Concepts in Nuclear Medicine . . . . . 172
Advanced Course in Engineering . . . . . . . . . . . . 159
Advanced Methods and Models (AMS 152) . . . . 160
Advanced Programming Techniques (C-235) . . . 176
Aircraft Engine Business Group—After-hours Courses . . . . . . . . . . . . . . . . . . 169
Aircraft Engine Business Group—Manufacturing Materials and Processes Program . . . . . . . . . . . . . . . . . . 167
Applied Electrical Principles . . . . . . . . . . . . . . . 162
Applied Engineering Mechanics . . . . . . . . . . . . . 169
Applied Mechanical Principles . . . . . . . . . . . . . . 162
Apprenticeship Training Program—Lynn River Works . . . . . . . . . . . . . . . . . . . 169
Auditing (FMP-301) . . . . . . . . . . . . . . . . . . . . . . 176
B-Course . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 159
Basic Electronics (EE-115) . . . . . . . . . . . . . . . . . 176
Basic Mathematics (AMS 151) . . . . . . . . . . . . . . 160
Basics of Nuclear Medicine . . . . . . . . . . . . . . . . 172
Basics of Ultrasound . . . . . . . . . . . . . . . . . . . . . . 172
Blueprint I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 169
Blueprint II . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 169
C-Course . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 160
Calculus I (AM-175) . . . . . . . . . . . . . . . . . . . . . . 176
Calculus II (AM-275) . . . . . . . . . . . . . . . . . . . . . . 176
Cases in Manufacturing Management (AMS 303) . . . . . . . . . . . . . . . . . . . . . . . . 160
College Algebra . . . . . . . . . . . . . . . . . . . . . . . . . 170
College Math I (AM-172) . . . . . . . . . . . . . . . . . . 177
College Math II (AM-272) . . . . . . . . . . . . . . . . . 177
Comprehensive Nuclear Medicine . . . . . . . . . . . 172
Computed Tomography Series . . . . . . . . . . . . . . 173
Computer Programming and Data Analysis (Unit 1) . . . . . . . . . . . . . . . . . . . . . . . . . . . 165
Computer Science . . . . . . . . . . . . . . . . . . . . . . . . 170
Continuing Education Program . . . . . . . . . . . . . 160
Conventional Metal Removal (M2.1) . . . . . . . . . 167
Data Analysis and Probability Evaluation (MFG 220) . . . . . . . . . . . . . . . . . . . . . . . . . . . 165
Designing with Microprocessors (EE-213) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 177
Dynamics in Nuclear Medicine . . . . . . . . . . . . . 173
Economic Analysis of Alternatives . . . . . . . . . . . 163
Economic Analysis of Alternatives (MFG 130) . . . . . . . . . . . . . . . . . . . . . . . . . . . 165
Effective Management Planning (MT-105) . . . . . 177
Electrical Discharge Machining (M2.3R) . . . . . . 167
Employee Relations in Manufacturing (MFG 105) . . . . . . . . . . . . . . . . . . . . . . . . . . . 165
Fabricated Parts Seminar . . . . . . . . . . . . . . . . . . 168
Field Engineering Program . . . . . . . . . . . . . . . . . 162
Financial Accounting (FMP-102) . . . . . . . . . . . . 177
Fundamentals of Numerical Control . . . . . . . . . 170

Gas Turbine Technology . . . . . . . . . . . . . . . . . . 162
GESIMTEL (Simulation with Teleprocessing) . . 163
GESIMTEL (Simulation with Teleprocessing) (AMS 311) . . . . . . . . . . . . . . . . . . . . . . . . . 161
High Temperature Metallurgy (M9) . . . . . . . . . . 169
Individual and Group Relations on the Job (MFG 102) . . . . . . . . . . . . . . . . . . . . . . . . . 165
Industrial Engineering (Unit II) . . . . . . . . . . . . . 165
Information Systems (FMP-302) . . . . . . . . . . . . 177
Introduction to Accounting Principles (MFG 25) . . . . . . . . . . . . . . . . . . . . . . . . . . 165
Introduction to Chemistry I (AC-181) . . . . . . . . 178
Introduction to Chemistry II (AC-281) . . . . . . . . 178
Introduction to Computers (MFG 111 or 111B) . . . . . . . . . . . . . . . . . . . . . . . . . . 165
An Introduction to Finance (MT-202) . . . . . . . . 176
Introduction to Probability Theory and Descriptive Statistics . . . . . . . . . . . . . . . . . . 163
Introduction to Radiologic Techniques . . . . . . . 174
Joining (M2.5) . . . . . . . . . . . . . . . . . . . . . . . . . . 168
Machine Shop Theory . . . . . . . . . . . . . . . . . . . . 170
Management Accounting (FMP-202) . . . . . . . . . 178
Management Problems Analysis Program . . . . . 163
Management Processes . . . . . . . . . . . . . . . . . . . 173
Managerial Accounting and Cost Analysis (Unit III) . . . . . . . . . . . . . . . . . . . . . . . . . . . 165
Manufacturing Engineering . . . . . . . . . . . . . . . . 170
Manufacturing Engineering (MFG 204) . . . . . . . 166
Manufacturing Information Systems (MFG 211) . . . . . . . . . . . . . . . . . . . . . . . . . . 166
Manufacturing Management (Unit IV) . . . . . . . 166
Manufacturing Materials and Processes (MFG 108) . . . . . . . . . . . . . . . . . . . . . . . . . . 166
Manufacturing Organization and Supervision (MFG 101) . . . . . . . . . . . . . . . . . . . . . . . . . . 166
Manufacturing Studies Program . . . . . . . . . . . . 164
Materials Engineering I (ME-121) . . . . . . . . . . . 178
Materials Management (MFG 215) . . . . . . . . . . 166
Mathematical Methods and Models . . . . . . . . . . 161
Measurements . . . . . . . . . . . . . . . . . . . . . . . . . . 170
Medical Education Programs, Medical Systems Division . . . . . . . . . . . . . . . . . . . . 172
Metallurgy . . . . . . . . . . . . . . . . . . . . . . . . . . . . 171
Miscellaneous Processes (M2.6) . . . . . . . . . . . . 168
Modeling . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 163
Modern Structural Analysis I (ME-122) . . . . . . . 178
Nuclear Cardiology . . . . . . . . . . . . . . . . . . . . . . 173
Nuclear Medicine Registration and Certification . . . . . . . . . . . . . . . . . . . . . . . . 173
Numerical Control (M2.2) . . . . . . . . . . . . . . . . . 167
Operating Costs, Budgets, and Measurements (MFG 125) . . . . . . . . . . . . . . . . . . . . . . . . . . 166
Operations Research and Applications Training . . . . . . . . . . . . . . . . . . . . . . . . . . . . 164
Personnel Administration (Unit V) . . . . . . . . . . 166
Principles of Cardiovascular Monitoring . . . . . . 173
Probabilistic Models (AMS 154) . . . . . . . . . . . . . 161
Probability Theory for Engineering Applications (AM-174) . . . . . . . . . . . . . . . . 178
Product Engineering (MFG 250) . . . . . . . . . . . . 166
Quality Assurance in Radiology . . . . . . . . . . . . 174
Quality Control . . . . . . . . . . . . . . . . . . . . . . . . . 171
Quality Control (MFG 217) . . . . . . . . . . . . . . . . 166
Quality Control (M2.7RF) . . . . . . . . . . . . . . . . . 168
Quality Control and Compliance in Nuclear Medicine . . . . . . . . . . . . . . . . . . . 174
Quality Control and Compliance in Ultrasound . . . . . . . . . . . . . . . . . . . . . . . . . . 174
Radiological Techniques in Dentistry . . . . . . . . . 175
Radiology Registration and Certification . . . . . . 174
Radioisotope Handlers . . . . . . . . . . . . . . . . . . . 175
Regression Analysis . . . . . . . . . . . . . . . . . . 161, 164
Research and Engineering Professional Development Program . . . . . . . . . . . . . . . . 175
Rotating Parts Seminar (M2.9R) . . . . . . . . . . . . 168
Sheet Metal (M2.4) . . . . . . . . . . . . . . . . . . . . . . 167
Standardization of Radiologic Techniques . . . . . 174
Statistical Inference . . . . . . . . . . . . . . . . . . . . . . 164
Statistical Inference (AMS 320) . . . . . . . . . . . . . 161
Steam Turbine Technology . . . . . . . . . . . . . . . . 162
Strength of Materials . . . . . . . . . . . . . . . . . . . . . 171
Supervisory Development and Organization Renewal Workshop (MT-2020) . . . . . . . . . . 179
Technical Communications . . . . . . . . . . . . . . . . 171
Time Sharing System and Applications . . . . . . . 164
Tool Design . . . . . . . . . . . . . . . . . . . . . . . . . . . 171
Trigonometry . . . . . . . . . . . . . . . . . . . . . . . . . . 171
Understanding X-Ray Generation . . . . . . . . . . . 174
Value Analysis (MT-104 or MT-204) . . . . . . . . . 179

**Grumman Corporation**

Accounting (GIACA01) . . . . . . . . . . . . . . . . . . 184
Administration of Government Contracts (HH02215) . . . . . . . . . . . . . . . . . . . . . . . . . 180
Aerospace Structures I (HH02030) . . . . . . . . . . . 180
Aerospace Structures II (HH02030) . . . . . . . . . . 180
ANS COBOL (GICPC01) . . . . . . . . . . . . . . . . . . 184
Assembly Language (GICPA01) . . . . . . . . . . . . . 184
Business Mathematics (GIACBM1) . . . . . . . . . . 185
Business and Technical Writing (FF01545) . . . . . 180
Communication and Motivation (EE01540) . . . . 181
Computer Programming, COBOL (FF01547) . . . . . . . . . . . . . . . . . . . . . . . . . 181
Computer Programming, FORTRAN (FF01548) . . . . . . . . . . . . . . . . . . . . . . . . . 181
Customer Contact and Service (GIPACC1) . . . . 185
Digital Signal Processing (HH02059) . . . . . . . . . 181
Effective Oral Presentations (FF01550) . . . . . . . 182
Effective Technical Presentations (FF00019) . . . . . . . . . . . . . . . . . . . . . . . . . 182
FORTRAN (GICPF01) . . . . . . . . . . . . . . . . . . . 185

Fundamentals of Electronic Data Processing (GICPB01) ... 185
Fundamentals of Supervisory Management (EE01546) ... 182
Grumman Aerospace Corporation ... 180
Grumman Data Systems Institute ... 184
Integrated Circuits, Part II (FF01572) ... 182
Introduction to Computer Programming (FF01546) ... 182
Introduction to Electronic Data Processing (GIPAB) ... 185
Introduction to Integrated Circuits (FF01571) ... 182
Introduction to Microprocessors (FF01544) ... 183
Management I (EE01542) ... 183
Management II (EE01376) ... 183
Managing for Productivity (EE01931) ... 183
Operating Systems Concepts/Job Control Language (GIOPJ01) ... 185
Report Program Generator (RPG) (GICPR01) ... 186
Senior Management Development Program (EE01252) ... 183
Systems Analysis (GISAS99) ... 186
Technical Publication Writing (HH01976) ... 184
Writing and Communications (FF01173) ... 184

**Hotel Association of New York City, Inc.**
**New York Hotel and Motel Trades**
**Council, AFL-CIO**

The Art of Cooking I (ITP C.I) ... 187
The Art of Cooking II (ITP C.II) ... 187
Basic Accounting (ITP 300A) ... 187
English as a Second Language ... 187
Food and Beverage Control (ITP 204) ... 188
Front Office Introduction (ITP 100) ... 188
Front Office Operations (ITP 200) ... 188
Fundamentals of Air Conditioning and Refrigeration ... 188
Machine Operations (ITP 200A) ... 188
Night Auditing (ITP 300) ... 188
Payroll and Payroll Taxes (ITP 300B) ... 188
Repair and Maintenance I (ITP 105) ... 189
Stewarding (ITP 104) ... 189
Typing I (ITP 103) ... 189
Typing II (ITP 203) ... 189
Typing III (ITP 303) ... 189
Typing IV (ITP 403) ... 189

**Hutchings Psychiatric Center**

Death and Dying ... 190
The Theories of Erik H. Erikson ... 190

**International Center of Photography**

Advanced Black-and-White Printing ... 191
Advanced Color ... 191
Advanced Independent Study ... 191
Advanced Seminar ... 191
Advanced Weekend Workshop ... 191
Alternatives to the Silver Image—Blueprint, Van Dyke, and Gum Bichromate Processes ... 192
Assignment: Anywhere ... 192
Audiovisual Production ... 192
Basic Color Printing ... 192
Careers: The Picture Researcher ... 192
Contemporary Photography—An Investigation into Current Trends ... 193
Editorial Concepts in Photography ... 193
Elements of Perception ... 193
The Essay as Personal Statement ... 193
Experimental Printing Processes, Part I ... 194
Experimental Printing Processes, Part II ... 194
Explorations in Color Perception and Printing ... 194
Expressive Black-and-White Printing ... 194
A History of Photography: From the Caves to the Present ... 194
Individual Projects at an Advanced Level ... 194
Intermediate Black-and-White Photography, Part I ... 195
Introduction to Color Photography ... 195
Introduction to Color Printing ... 195
Introduction to Large Format Photography ... 195
Introduction to Studio Photography ... 195
Landscape, Still Life, Interiors ... 196
Large Format Photography ... 196
The Master Print ... 196
More Than One—Related Imagery ... 196
Photographers on Photography—Applying the Masters for One's Own ... 196
Photographing People ... 197
Photography I ... 197
Photography II ... 197
Photography III ... 197
Photography IV ... 197
Photography, Aesthetics, and Criticism ... 198
Photography and Books ... 198
The Professional Photographer ... 198
Social Dilemma/Public Awareness ... 198
The Studio as Palette: Fashion and Portrait Photography ... 199
Subject as Artifact—Image as Reality ... 199
Teachers' Workshop—Photography as an Educational Tool ... 199
Urban Imagery ... 199
Vision and Culture ... 200
The Zone Systems for All Formats ... 200

**International Claim Association**

Claim Administration (C3) . . . . . . . . . . . . . . . . . . 201
ICA Claims Program . . . . . . . . . . . . . . . . . . . . . 201
Life and Health Insurance Law (C2) . . . . . . . . . . 201
Medical and Dental Aspects of Claims (C1) . . . . 201
Medical Aspects of Claims (C2) . . . . . . . . . . . . . 201

**Joint Apprentice Committee of the Electrical Industry, Local Union 3**

Electrical Installation and Practice . . . . . . . . . . 202

**Kings County Hospital Center School of Anesthesia for Nurses**

Anatomy, Physiology, and Pathophysiology I . . . 203
Anatomy, Physiology, and Pathophysiology II . . . 203
Basic Chemistry . . . . . . . . . . . . . . . . . . . . . . . . 203
Clinical Practicum . . . . . . . . . . . . . . . . . . . . . . . 203
Introduction to Anesthesia . . . . . . . . . . . . . . . . . 204
Pharmacology I . . . . . . . . . . . . . . . . . . . . . . . . . 204
Pharmacology II . . . . . . . . . . . . . . . . . . . . . . . . 204
Principles of Anesthesia Practice I . . . . . . . . . . . 204
Principles of Anesthesia Practice II . . . . . . . . . . 204
Principles of Anesthesia Practice III . . . . . . . . . 204

**Lenox Hill Hospital**

Health Services Administration
    in the United States . . . . . . . . . . . . . . . . . . . 205
Motivational Dynamics . . . . . . . . . . . . . . . . . . . 205

**Letchworth Village Developmental Center**

Basics in Health Sciences . . . . . . . . . . . . . . . . . 206
Intervention Techniques in Mental
    Retardation . . . . . . . . . . . . . . . . . . . . . . . . . 206
Mental Hygiene Therapy Aide Traineeship . . . . 206
Practicum in the Care of the Retarded . . . . . . . . 206

**Life Office Management Association, Inc.**

Administrative Management (Part 9-AM) . . . . . 207
Economics and Investments (Part 5) . . . . . . . . . 207
Electronic Data Processing (Part 8b-DP) . . . . . . 207
Fellow, Life Management Institute Insurance
    Education Program . . . . . . . . . . . . . . . . . . . 207
Group Insurance (Part 9-GI) . . . . . . . . . . . . . . 208
Information Systems (Part 9-IS) . . . . . . . . . . . . 208
Legal Aspects of Life Insurance (Part 3) . . . . . . 208
Life and Health Insurance Claims (Part 9-CL) . . 208
Life Company Operations (Part 2) . . . . . . . . . . . 208
Life Insurance Accounting (Part 4) . . . . . . . . . . 209
Life Insurance Accounting (Part 9-IA) . . . . . . . . 209
Life Insurance Investments (Part 9-LI) . . . . . . . . 209
LOMA Management Program . . . . . . . . . . . . . . 211
Management Principles (Part 8) . . . . . . . . . . . . . 209
Management Science (Part 9-MS) . . . . . . . . . . . 209
Managerial Accounting (Part 9-MA) . . . . . . . . . 210
Mathematics of Life Insurance (Part 6) . . . . . . . 210
Office Administration (Part 7) . . . . . . . . . . . . . . 210
Pension Planning (Part 9-PP) . . . . . . . . . . . . . . . 210
Personnel Administration (Part 9-PA) . . . . . . . . 210
Principles of Life Insurance (Part 1) . . . . . . . . . . 211
Selection of Risks (Part 9-SR) . . . . . . . . . . . . . . 211
Systems and Data Processing (Part 7) . . . . . . . . . 211

**LINK, Inc.**

Advanced Communication and Counseling
    Skills . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 212
Introduction to Communication Skills . . . . . . . . 212

**Literacy Volunteers of Connecticut, Inc.**

Teaching Training/Tutorial Experience . . . . . . . 213

**Literacy Volunteers of New York State, Inc.**

Teacher Training/Tutorial Experience . . . . . . . . 214

**Manhattan Developmental Center**

Deviancy and Normalization . . . . . . . . . . . . . . . 215
Try Another Way Task Analysis . . . . . . . . . . . . 215
Working in Group Homes . . . . . . . . . . . . . . . . . 215

**Manufacturers Hanover Trust Company**

Accounting . . . . . . . . . . . . . . . . . . . . . . . . . . . 216
Corporate Finance . . . . . . . . . . . . . . . . . . . . . . 217
Human Resources—Operations Division . . . . . . 216
Management Training Program—Finance . . . . . 216
Managing Clerical Production . . . . . . . . . . . . . . 216
Money and Banking . . . . . . . . . . . . . . . . . . . . . 217

**Marine Midland Bank**

Management Techniques . . . . . . . . . . . . . . . . . . 218
Officer Development Program . . . . . . . . . . . . . . 218
Personal Development Program . . . . . . . . . . . . . 218

**Marsh & McLennan, Incorporated**

Business Presentation Skills: Oral and Written . 219
Emerging Techniques and Services for
    Major Accounts . . . . . . . . . . . . . . . . . . . . . . 219
Management Methods . . . . . . . . . . . . . . . . . . . . 219
Oral Presentation Skills . . . . . . . . . . . . . . . . . . . 219
Principles of Insurance . . . . . . . . . . . . . . . . . . . 219
Written Presentation Skills . . . . . . . . . . . . . . . . 219

**McGraw-Hill, Inc.**

Advanced Shorthand Dictation Clinic (BE-102) . . . . . . . . . . 220
Effective Communications (BE-401) . . . . . . . . . . 220
Elementary Principles of Accounting I (BE-300) . . . . . . . . . . 220
English for Business (BE-400) . . . . . . . . . . 220
French for Beginners (LA-100) . . . . . . . . . . 220
French II (LA-101) . . . . . . . . . . 221
Graphics—Printing Process and Production (BE-500) . . . . . . . . . . 221
Italian for Beginners (LA-300) . . . . . . . . . . 221
Italian II (LA-301) . . . . . . . . . . 221
Principles of Accounting II (BE-301) . . . . . . . . . . 221
Shorthand I: Theory and Basic Principles (BE-100) . . . . . . . . . . 221
Shorthand II: Advanced Theory, Dictation, and Transcription (BE-101) . . . . . . . . . . 222
Spanish for Beginners (LA-200) . . . . . . . . . . 222
Spanish II (LA-201) . . . . . . . . . . 222
Typewriting I (BE-200) . . . . . . . . . . 222
Typewriting II (BE-201) . . . . . . . . . . 222

**Memorial Sloan-Kettering Cancer Center**

Anatomy and Physiology . . . . . . . . . . 223
Clinical Practicum . . . . . . . . . . 223
Clinical Radiation Therapy . . . . . . . . . . 223
Darkroom Chemistry and Basic Radiography . . . . . . . . . . 223
Ethics, Records, Orientation, and Terminology . . . . . . . . . . 224
Mathematics . . . . . . . . . . 224
Nuclear Medicine . . . . . . . . . . 224
Nursing . . . . . . . . . . 224
Oncology . . . . . . . . . . 224
Pathology . . . . . . . . . . 224
Pathology and Oncology . . . . . . . . . . 224
Physics I . . . . . . . . . . 224
Physics II . . . . . . . . . . 224
Phsyics III . . . . . . . . . . 224
Physics IV . . . . . . . . . . 224
Radiation Biology . . . . . . . . . . 224
Radiation Safety . . . . . . . . . . 225
Radiation Therapy Physics . . . . . . . . . . 225
Radiological Physics . . . . . . . . . . 225
Technical Radiation Oncology . . . . . . . . . . 225
Treatment Planning . . . . . . . . . . 225

**Merrill Lynch & Co. Inc.**

Advanced Management Development Program . . . . . . . . . . 226
Applied Economics . . . . . . . . . . 227
Basic Management Development Program . . . . 226
Communications . . . . . . . . . . 227
Donald T. Regan School of Advanced Financial Management . . . . . . . . . . 227
Fundamentals of Risk Management . . . . . . . . . . 227
The Investor's Taxes/Business and Exempt Organizations, Trusts, Estates and Gifts . . . . . . . . . . 227
The Investor's Taxes/Individual Taxation . . . . . . 228
Marketing . . . . . . . . . . 228
Options Strategies Applied . . . . . . . . . . 228
Securities Training Program . . . . . . . . . . 226
A Study of the Securities Industry for the Professional Account Executive . . . . . . . . . . 226

**Misericordia Hospital Medical Center**

Clinical Practicum . . . . . . . . . . 229
Equipment Maintenance . . . . . . . . . . 229
Film Critique . . . . . . . . . . 229
Fundamentals of Radiography . . . . . . . . . . 229
Medical and Surgical Diseases . . . . . . . . . . 230
Nuclear Medicine . . . . . . . . . . 230
Nursing Procedures . . . . . . . . . . 230
Principles of Radiographic Exposure . . . . . . . . . . 230
Radiation Biology . . . . . . . . . . 230
Radiation Protection . . . . . . . . . . 231
Radiographic Anatomy and Physiology . . . . . . . 231
Radiographic Positioning . . . . . . . . . . 231
Radiographic Processing . . . . . . . . . . 231
Radiologic Physics . . . . . . . . . . 231
Radiologic Physics and Mathematics . . . . . . . . . 231
School of Radiologic Technology . . . . . . . . . . 229
Special Procedures . . . . . . . . . . 231
Topographic Anatomy . . . . . . . . . . 232

**Mobil Oil Corporation**

Factors in Management . . . . . . . . . . 233
Human Forces in Management . . . . . . . . . . 233

**Monroe County Office of Employment and Training**

Life Management and Employability Skills . . . . 395

**Nassau County Department of Drug and Alcohol Addiction**

Principles of Counseling . . . . . . . . . . 234

**Nassau County Office of Employment and Training**

Accounting . . . . . . . . . . 396
Bookkeeping . . . . . . . . . . 396
Bookkeeping and Accounting for Secretaries I and II . . . . . . . . . . 396

Business English I and II . . . . . . . . . . . . . . . . . 396
Business English I, II, and III . . . . . . . . . . . . . . . 396
Business Math . . . . . . . . . . . . . . . . . . . . . . . . . 396
Clerk-Typist . . . . . . . . . . . . . . . . . . . . . . . . . . 396
Executive Secretary . . . . . . . . . . . . . . . . . . . . . 397
Intermediate Typing . . . . . . . . . . . . . . . . . . . . . 397
Introductory Typing . . . . . . . . . . . . . . . . . . . . . 397
Medical Office Practice . . . . . . . . . . . . . . . . . . . 397
Medical Records Clerk . . . . . . . . . . . . . . . . . . . . 397
Medical Terminology . . . . . . . . . . . . . . . . . . . . . 397
Office Practice . . . . . . . . . . . . . . . . . . . . . . . . 397
Oral Communications . . . . . . . . . . . . . . . . . . . . 397
Secretarial Procedures I and II, and
    Records Management . . . . . . . . . . . . . . . . . 397
Shorthand and Transcription I, II,
    and III . . . . . . . . . . . . . . . . . . . . . . . . . . 397
Shorthand—Transcription . . . . . . . . . . . . . . . . . 397
Stenography . . . . . . . . . . . . . . . . . . . . . . . . . . 398
Typewriting I and II . . . . . . . . . . . . . . . . . . . . . 398
Typewriting I, II, and III . . . . . . . . . . . . . . . . . . 398
Typing . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 398
Word Processing . . . . . . . . . . . . . . . . . . . . . . . 398

**Nassau County Police Department**

Community Relations . . . . . . . . . . . . . . . . . . . . 235
Criminal Investigation . . . . . . . . . . . . . . . . . . . 235
Criminal Law and Procedure . . . . . . . . . . . . . . . 235
Introduction to Law Enforcement . . . . . . . . . . . 236
Physical Education . . . . . . . . . . . . . . . . . . . . . 236
Police Operations . . . . . . . . . . . . . . . . . . . . . . 236
Recruit Training Program . . . . . . . . . . . . . . . . . 235

**National Audubon Society**

Anglo-American Traditional Music and
    Dance . . . . . . . . . . . . . . . . . . . . . . . . . . . 237
Anthropology: A Comparison of Sub-Cultures
    in the United States . . . . . . . . . . . . . . . . . . 237
Applied Human Ecology: An Introduction
    to Expedition Education . . . . . . . . . . . . . . . 237
Appropriate Technology and Self-
    Sufficiency . . . . . . . . . . . . . . . . . . . . . . . . 238
Concepts and Processes in Education . . . . . . . . 238
Cultural Perspectives of Human
    Communities . . . . . . . . . . . . . . . . . . . . . . . 238
The Development of America: Its People,
    Values, and Institutions . . . . . . . . . . . . . . . 238
English as a Means of Self-Expression . . . . . . . . 238
The Environment: Its Impact on Personal
    and Social Relationships . . . . . . . . . . . . . . . 239
Environmental Geoscience . . . . . . . . . . . . . . . . 239
The Geology of America's Public Lands . . . . . . 239
Geology of the Pacific Northwest . . . . . . . . . . . 239
Institute for Expedition Education . . . . . . . . . . 237
Introduction to Astronomy . . . . . . . . . . . . . . . . 239
Introduction to Geological Principles . . . . . . . . 239
Methods, Materials, and Resources in:
    (Advanced Courses In Institute Subject
    Areas) . . . . . . . . . . . . . . . . . . . . . . . . . . . 240
Mountain, Desert, and Human Ecology of
    the Southern Rocky Mountains and the
    Colorado Plateau . . . . . . . . . . . . . . . . . . . . 240
Natural History of the Pacific Northwest . . . . . . 240
New England Folklore . . . . . . . . . . . . . . . . . . . 240
An Overview of Natural History and
    Ecological Theory . . . . . . . . . . . . . . . . . . . . 240
Perspectives in Environmental Education . . . . . 241
Physical Education . . . . . . . . . . . . . . . . . . . . . 241
Physical Education: Camp and Outdoor
    Education . . . . . . . . . . . . . . . . . . . . . . . . . 241
Practicum in Communication . . . . . . . . . . . . . . 241
Practicum in Group Dynamics . . . . . . . . . . . . . . 241
Salt and Fresh Water Ecology . . . . . . . . . . . . . . 241
Special Topics in Ecology: Orinthology . . . . . . . 241

**National Joint Apprenticeship and Training Committee for the Electrical Industry**

National Electrical Course for Apprentice
    Inside Wiremen . . . . . . . . . . . . . . . . . . . . . 243

**New Rochelle Hospital Medical Center**

Motivational Dynamics . . . . . . . . . . . . . . . . . . 244

**New York Botanical Garden**

Basic Botany . . . . . . . . . . . . . . . . . . . . . . . . . 245
Cellular and Molecular Botany . . . . . . . . . . . . . 245
Commercial Greenhouse Management . . . . . . . 245
Cryptogamic Botany . . . . . . . . . . . . . . . . . . . . 245
Education Program . . . . . . . . . . . . . . . . . . . . . 245
Entomology . . . . . . . . . . . . . . . . . . . . . . . . . . 246
Environmental Botany . . . . . . . . . . . . . . . . . . . 246
Evolutionary Biology . . . . . . . . . . . . . . . . . . . . 246
Field Botany . . . . . . . . . . . . . . . . . . . . . . . . . 246
Field Botany (Cryptogams) . . . . . . . . . . . . . . . . 246
Field Botany (Phanerogams) . . . . . . . . . . . . . . . 246
Field Studies . . . . . . . . . . . . . . . . . . . . . . . . . 246
Fruit and Vegetable Gardening . . . . . . . . . . . . . 246
Gardening Practice . . . . . . . . . . . . . . . . . . . . . 246
General Botany . . . . . . . . . . . . . . . . . . . . . . . 247
General Genetics . . . . . . . . . . . . . . . . . . . . . . 247
Genetics and Evolution . . . . . . . . . . . . . . . . . . 247
Home Landscaping and Garden
    Maintenance . . . . . . . . . . . . . . . . . . . . . . . 247
Horticultural Taxonomy . . . . . . . . . . . . . . . . . 247
Horticulture Business Management . . . . . . . . . 247
Lawns and Grounds Maintenance . . . . . . . . . . . 247
Local Flora in Autumn and Spring . . . . . . . . . . 247
Local Flora in Spring (Phanerogams) . . . . . . . . 247

Microtechnique ... 247
Molecular Biology: DNA, RNA, Protein ... 247
Morphology of Flowering Plants ... 247
Natural History of the Bronx River Valley ... 247
Natural Vegetation (Ecology) ... 247
Nursery and Greenhouse Management ... 247
Nursery Management ... 248
Paleobotany ... 248
Physiological Plant Ecology ... 248
Plant Cell, Tissue, and Organ Culture ... 248
Plant Cytology and Cytogenetics ... 248
Plant Development ... 248
Plant Ecology ... 248
Plant Form and Function ... 248
Plant Hybridization ... 248
Plant Membrane Biology ... 248
Plant Morphology and Taxonomy ... 248
Plant Pests and Diseases ... 248
Plant Physiology ... 248
Plant Propagation and Grafting ... 248
Plants for Landscaping ... 248
Plants for Landscaping Your Home ... 249
Pollen and Spores ... 249
Soil Science ... 249
Soil Testing ... 249
Systematic Botany ... 249
Taxonomy of Spermatophytes ... 249
Turf and Grounds Maintenance ... 249
Vegetable Gardening ... 249
Winter Botany ... 249

**New York City Department of Employment**

Assessment Skills for Employment Development Planning ... 250
Basic Interviewing (BII) ... 250
Case Management Supervision (DIII) ... 250
Counseling Supervision ... 250
Descriptive Statistics ... 250
Human Relations Laboratory: Personal Development and Group Dynamics ... 250
Introduction to Basic Employment Assessment (BV) ... 251
Introduction to Basic Employment Assessment and Employment Development Planning ... 251
Introduction to Interviewing ... 251
Management Development (D IV) ... 251
Manpower Behavioral Vocational Counseling ... 251
Manpower Vocational Counseling Techniques ... 251
New York City Institutions that Affect the Unemployed (BX) ... 251
Organizational Consultation ... 252

**New York City Health and Hospitals Corporation Central School of Respiratory Therapy**

Acid Base Physiology (112) ... 253
Anatomy and Physiology (106) ... 253
Cardiopulmonary Physiology (108) ... 253
Chemistry and Physics (105) ... 253
Clinical Practicum (116) ... 254
Equipment Used in Gas Therapy, Humidification, and Aerosol Therapy, and Its Maintenance (109) ... 254
Hospital Organization and Ethics in the Care of the Sick (101 and 102) ... 253
Mathematics (104) ... 254
Medical Mathematics (104) ... 254
Pathology (115) ... 254
Pharmacology (111) ... 254
Ventilators and Their Maintenance (113) ... 254

**New York City Police Department**

Basic Criminal Investigator's Course ... 256
Basic Management Orientation Course ... 256
Basic Management Theory and Techniques ... 256
Basic Spanish for Police Officers ... 256
Community Relations for Police ... 258
Criminal Investigation ... 258
Criminal Law ... 258
Homicide Investigations ... 257
Inservice Courses ... 256
Intermediate Spanish for Police Officers ... 257
Internal Investigations ... 257
Internship in Criminal Justice ... 259
Introduction to Law ... 259
Introduction to Law Enforcement ... 259
Introduction to Social Psychology ... 259
Introduction to Spanish Language ... 257
Physical Education ... 259
Robbery Investigations ... 257
Security Operations ... 257
Sex Crimes Investigations ... 258
Student Officer Training Program ... 258

**New York Council on Alcoholism, Inc.– ACCEPT**

Training Course for Employee Alcoholism Counselors ... 261

**New York Institute of Credit**

Accounting I ... 262
Advanced Credit in International Trade ... 262
Bank Lending I ... 262
Bank Lending II ... 262

Business Communications I . . . . . . . . . . . . . . . . 262
Business Communications II . . . . . . . . . . . . . . . 262
Business Communications III . . . . . . . . . . . . . . 263
Business Organization . . . . . . . . . . . . . . . . . . . . 263
Business Psychology . . . . . . . . . . . . . . . . . . . . . 263
Credit Law I . . . . . . . . . . . . . . . . . . . . . . . . . . 263
Credit Law II . . . . . . . . . . . . . . . . . . . . . . . . . 263
Factoring and A/R Financing . . . . . . . . . . . . . . . 263
Marketing . . . . . . . . . . . . . . . . . . . . . . . . . . . 263

**New York State Assembly**

Assembly Intern Program . . . . . . . . . . . . . . . . . 264

**New York State Association of Realtors, Inc.**

Graduate, Realtors' Institute Course I . . . . . . . . 265
Graduate, Realtors' Institute Course II . . . . . . . 265
Graduate, Realtors' Institute Course III . . . . . . . 265
Graduate, Realtors' Institute Course IV . . . . . . . 266
New York Realtors' Institute . . . . . . . . . . . . . . . 265

**New York State Bankers Association**

Bankers School of Agriculture . . . . . . . . . . . . . . 267
Consumer Credit School . . . . . . . . . . . . . . . . . . 267
EDP Audit and Control School . . . . . . . . . . . . . 267
Estate Administration School . . . . . . . . . . . . . . . 267
Management School for Career
    Development . . . . . . . . . . . . . . . . . . . . . . . . 268
Trust Administration School . . . . . . . . . . . . . . . 268

**New York State Commission of Correction**

Basic Training Program—Phases I and II . . . . . . 269
Hostage Negotiator's Seminar . . . . . . . . . . . . . . 269
Management Laboratory . . . . . . . . . . . . . . . . . . 269

**New York State Department of Civil Service**

Introduction to EDP—Technical (B-1-110) . . . . . 270
Public Administration Training Program . . . . . . 270

**New York State Department of Civil Service CETA Training Program**

Shorthand I . . . . . . . . . . . . . . . . . . . . . . . . . . 399
Typing I . . . . . . . . . . . . . . . . . . . . . . . . . . . . 399

**New York State Department of Correctional Services**

Conversational Spanish . . . . . . . . . . . . . . . . . . 272
Foundations of Physical Activity . . . . . . . . . . . . 272
Labor Contract Administration . . . . . . . . . . . . . 272
Legal Issues in Corrections for
    Supervisors: Inmates' Rights
    and Responsibilities . . . . . . . . . . . . . . . . . . . 272
Network Training Program . . . . . . . . . . . . . . . . 273
Self-Defense . . . . . . . . . . . . . . . . . . . . . . . . . . 273
Trainer Training in Interpersonal
    Communication Skills—Master
    Trainer Level . . . . . . . . . . . . . . . . . . . . . . . . 273

**New York State Department of Labor**

Basic Placement Training . . . . . . . . . . . . . . . . . 274
Basic Unemployment Insurance Claims
    Training . . . . . . . . . . . . . . . . . . . . . . . . . . . 274
Fundamentals of Supervision I . . . . . . . . . . . . . 274
Fundamentals of Supervision II . . . . . . . . . . . . 275
Improving Organizational Effectiveness
    Through Behavioral Techniques . . . . . . . . . 275
Labor Standards Investigator Basic
    Training . . . . . . . . . . . . . . . . . . . . . . . . . . . 275
Perspectives in Management . . . . . . . . . . . . . . . 275
Seminars in Staff Development . . . . . . . . . . . . . 275
Systems in Government . . . . . . . . . . . . . . . . . . 275

**New York State Department of Motor Vehicles**

Concepts of Programming . . . . . . . . . . . . . . . . . 276
Programming and Debugging in Assembler
    Language . . . . . . . . . . . . . . . . . . . . . . . . . . 276
System Control and Assembler Language
    Coding . . . . . . . . . . . . . . . . . . . . . . . . . . . . 276

**New York State Department of Social Services**

Administration and Organizational System . . . . 277
The Behavioral Approach to Management . . . . 277
Management Systems . . . . . . . . . . . . . . . . . . . . 277
Managing in Public Social Services . . . . . . . . . . 277
Social Welfare Administration . . . . . . . . . . . . . . 277

**New York State Department of State**

Arson Investigation Course . . . . . . . . . . . . . . . . 278
Fire Science Training Techniques . . . . . . . . . . . 278
Introduction to Fire Department
    Administration . . . . . . . . . . . . . . . . . . . . . . 278
Introduction to Fire Inspection . . . . . . . . . . . . . 279
Introduction to Industrial Fire Protection . . . . . 279

**New York State Division for Youth**

Basic Childcare Management I . . . . . . . . . . . . . 280
Basic Childcare Management II . . . . . . . . . . . . 280
Introduction to Basic Childcare Management . . 280

**New York State Division of Criminal Justice Services – Bureau for Municipal Police**

Police Instructor Development Seminar . . . . . . 281

**New York State Division of State Police**

Accident Investigation . . . . . . . . . . . . . . . . . . . . 282
Basic Recruit Program . . . . . . . . . . . . . . . . . . . . 282
Basic Supervisory Administration . . . . . . . . . . . 284
Community Relations for Police . . . . . . . . . . . . 282
Consolidated Laws and Procedures . . . . . . . . . . 282
Criminal Investigations . . . . . . . . . . . . . . . . . . . 283
Criminal Investigations II . . . . . . . . . . . . . . . . . 284
Criminal Law . . . . . . . . . . . . . . . . . . . . . . . . . . 283
Criminal Procedure Law . . . . . . . . . . . . . . . . . . 283
Emergency Services School . . . . . . . . . . . . . . . 283
Inservice Courses . . . . . . . . . . . . . . . . . . . . . . . 284
Inservices Training for Noncommissioned
  Officers . . . . . . . . . . . . . . . . . . . . . . . . . . . 284
Introduction to Law Enforcement and
  Government . . . . . . . . . . . . . . . . . . . . . . . . 283
Noncommissioned Officers Course . . . . . . . . . . 284
Vehicle and Traffic Law I . . . . . . . . . . . . . . . . . 283
Vehicle and Traffic Law II . . . . . . . . . . . . . . . . 283

**New York State Division of Substance Abuse Services**

Advanced Seminar in Personality Dynamics
  and Treatment Techniques with Drug
  Abusers . . . . . . . . . . . . . . . . . . . . . . . . . . . 285
Assessment Interviewing for Treatment
  Planning . . . . . . . . . . . . . . . . . . . . . . . . . . 285
Basic Issues in the Treatment of Women
  Substance Abusers . . . . . . . . . . . . . . . . . . . 285
Basic Management Skills . . . . . . . . . . . . . . . . . 285
Black and Puerto Rican Americans and
  American Social Institutions . . . . . . . . . . . . 286
Booze: Mankind's Oldest Problem Drug
  (AK 107) . . . . . . . . . . . . . . . . . . . . . . . . . . 286
Counselor Training: Short-Term Client
  Systems . . . . . . . . . . . . . . . . . . . . . . . . . . . 286
Drugs: Their Use and Abuse . . . . . . . . . . . . . . 286
Experimental Seminar in Behavior Therapy
  Techniques . . . . . . . . . . . . . . . . . . . . . . . . 286
Family Counseling . . . . . . . . . . . . . . . . . . . . . . 290
The Group Process . . . . . . . . . . . . . . . . . . . . . 290
Introduction to Behavioral Dynamics . . . . . . . . 287
Introduction to Behavioral Techniques
  (AK 102) . . . . . . . . . . . . . . . . . . . . . . . . . . 287
Introduction to Communication Skills
  (AK 101) . . . . . . . . . . . . . . . . . . . . . . . . . . 287
Introduction to Group Counseling . . . . . . . . . . 287
Introduction to Techniques of Behavior
  Modification (AK 109) . . . . . . . . . . . . . . . . 287
Orientation to Substance Abuse: Its Nature
  and Treatment (AK 108) . . . . . . . . . . . . . . 287
Overview of Substance Abuse . . . . . . . . . . . . . 288
Preparing the Ex-Addict for Employment . . . . . 288
Puerto Rican History and Culture
  Workshop – An Overview . . . . . . . . . . . . . . 288
Seminar in Group Psychotherapy . . . . . . . . . . . 288
Seminar in Milieu Treatment Approaches . . . . . 288
Seminar in Personality Development,
  Psychopathology, and Treatment
  Techniques . . . . . . . . . . . . . . . . . . . . . . . . . 289
Seminar in Psychopathology and Group
  Treatment Modalities (AK 104) . . . . . . . . . . 289
Supervision of Clinical Counselors . . . . . . . . . . 291
Training of Trainers . . . . . . . . . . . . . . . . . . . . . 289
Vocational Rehabilitation in the
  Treatment Setting . . . . . . . . . . . . . . . . . . . . 289
Women in Treatment I . . . . . . . . . . . . . . . . . . . 289
Women in Treatment II . . . . . . . . . . . . . . . . . . 290
Working With Adolescents . . . . . . . . . . . . . . . . 291

**New York State Office of Mental Health**

Case Management Services in
  Community Support Systems . . . . . . . . . . . 292

**New York Telephone Company**

Accounting for Engineers (4031) . . . . . . . . . . . 293
Accounting Manager's Workshop (1007) . . . . . . 293
Advanced Data Training (A0000) . . . . . . . . . . . 293
Advanced FORTRAN Coding and
  Workshop (6068) . . . . . . . . . . . . . . . . . . . . 301
A.T.& T. Manager Training Course (3002) . . . . . 293
Basic ANS COBOL Coding and
  Workshop (6074) . . . . . . . . . . . . . . . . . . . . 301
Basic Assembler Language Coding
  (ALC) (6025) . . . . . . . . . . . . . . . . . . . . . . . 301
Basic Installation – Suburban (102) . . . . . . . . . 294
Basic Installation – Urban (101) . . . . . . . . . . . . 294
Basic OS – JCL and Utilities for
  Operations Support (6030) . . . . . . . . . . . . . 301
Basic OS Utilities Workshop (6023) . . . . . . . . . 301
Basic PL/I Coding and Workshop (6067) . . . . . . 301
Business Office Supervisor (3003) . . . . . . . . . . 294
Career Development Workshop . . . . . . . . . . . . 294
COBOL Core Debugging (6029) . . . . . . . . . . . . 301
Commercial Instructor Training Course
  (3004) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 294
Computer Applications in Marketing
  (M0906) . . . . . . . . . . . . . . . . . . . . . . . . . . 305
Computer Fundamentals for Managers
  (6064) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 302
Computer Technology Training Program . . . . . . 301

Concepts of Total System Development (6070) . . . . . . . . . . . . . . . . . . . . . . . . . . . 302
Consumer Behavior and Marketing Strategy (M0902) . . . . . . . . . . . . . . . . . . . . . 305
Crossbar Tandem (62) . . . . . . . . . . . . . . . . . . . . 295
Engineering Economy Principles (4067) . . . . . . . 295
Engineering Economy Techniques (4007) . . . . . . 295
Engineering Economy Techniques—CUCRIT Analysis (4007) . . . . . . . . . . . . . . . 295
English as a Second Language . . . . . . . . . . . . . 295
First Level Workshop (5036) . . . . . . . . . . . . . . . 295
Force Management (9002, ACD 9046, TSPS 9044) . . . . . . . . . . . . . . . . . . . . . . . . . . . 296
Forecasting and Sampling (M0904) . . . . . . . . . . 305
FORTRAN IV Coding and Workshop (6034) . . . . . . . . . . . . . . . . . . . . . . . . . . . 302
IBM Information Management System (IMS/VS) Batch Programming (6048) . . . . . 302
IBM Information Management System (IMS/VS) Teleprocessing Programming (6050) . . . . . . . . . . . . . . . . . . . . . . . . . . . 302
IBM OS—JCL and Utilities . . . . . . . . . . . . . . . 302
Initial Management Training for Plant Foreman (8012) . . . . . . . . . . . . . . . . . . . . . 296
Instructional Technology Workshop (5034) . . . . 296
Interactive Programming . . . . . . . . . . . . . . . . . 303
Introduction to Data Processing for Operations Support (6077) . . . . . . . . . . . . . 303
Introduction to OS Job Control Language (JCL) (6020) . . . . . . . . . . . . . . . . . . . . . . . . 303
Introduction to Programming . . . . . . . . . . . . . . 303
Introduction to Programming and IBM S/370 (6072) . . . . . . . . . . . . . . . . . . . . . . . . 303
Introduction to Time-Sharing (6065) . . . . . . . . . 304
Key Telephone Systems—Repair (41) . . . . . . . . 296
Language Skills . . . . . . . . . . . . . . . . . . . . . . . . 296
Market Research and Segmentation (M0901) . . . . . . . . . . . . . . . . . . . . . . . . . . 305
Marketing Concepts and Analysis (M0900) . . . . 305
Marketing Management Training Program . . . . 305
Mathematics . . . . . . . . . . . . . . . . . . . . . . . . . . 297
Methods/Staff Assistant Administrative Training (1004) . . . . . . . . . . . . . . . . . . . . . 297
Multivariate Analysis (M0905) . . . . . . . . . . . . . 306
Number Five Crossbar—with AMA (Automatic Message Accounting) (49 & 126) . . . . . . . . . 297
Number One Crossbar (109) . . . . . . . . . . . . . . . 297
Numer One E.S.S. (Electronic Switching Systems) (507, 508, 509, 534 & 539) . . . . . . . 297
Operating Systems Applications . . . . . . . . . . . . 304
OS Utilities for Operations Support (6031) . . . . . 304
Outside Plant Engineering—Basic (4032) . . . . . . . . . . . . . . . . . . . . . . . . . . . 298
Outside Plant Engineering—Building Industry Consultant (4035) . . . . . . . . . . . . . . . . . . . 298
Outside Plant Engineering—Exchange Feeder Route Analysis Program (4065, 4084) . . . . . 298
Outside Plant Engineering—Facilities (4068) . . . . . . . . . . . . . . . . . . . . . . . . . . . 298
Outside Plant Engineering—Feeder Route Analysis (4034) . . . . . . . . . . . . . . . . . . . . . 298
Panel Apparatus . . . . . . . . . . . . . . . . . . . . . . . 298
Panel Selector Circuits . . . . . . . . . . . . . . . . . . 298
Panel Senders and Decoders . . . . . . . . . . . . . . 298
Panel Switching Systems . . . . . . . . . . . . . . . . . 298
Pre-Management Training Course (9004) . . . . . . 299
Programmed Training Course for Service Assistants (9012) . . . . . . . . . . . . . . . . . . . . . 299
Programmer Productivity Techniques (6069) . . . 304
Project Management . . . . . . . . . . . . . . . . . . . . 304
Sampling and Forecasting (M0904) . . . . . . . . . . 306
Second Level Staff Administrative Training (1005) . . . . . . . . . . . . . . . . . . . . . . . . . . . 299
Second Level Workshop (5030) . . . . . . . . . . . . . 299
Service Analysis (9001, TSPS 9001, Directory Assistance 9040) . . . . . . . . . . . . . . . . . . . . 300
Station Repair (103) . . . . . . . . . . . . . . . . . . . . . 300
Statistical Foundations (M0903) . . . . . . . . . . . . 306
Supervisory Decisions, Actions, and Growth (5002) . . . . . . . . . . . . . . . . . . . . . . . . . . . 300
Supervisory Responsibilities Workshop (8025) . . . . . . . . . . . . . . . . . . . . . . . . . . . 300
Thirteen Week Pre-Management Training Course (9004) . . . . . . . . . . . . . . . . . . . . . . 300
Trainer Workshop (5031) . . . . . . . . . . . . . . . . . 300
TSO for COBOL Programmers (6056) . . . . . . . . 304
TSO for PL/I Programmers (6075) . . . . . . . . . . 304
TSO/SPF for COBOL Programmers (6076) . . . . 304
Using Time-Sharing and Introduction to the BASIC Language (6066) . . . . . . . . . . 304

**Newark Developmental Center**

Administration of Medications . . . . . . . . . . . . . 307
Human Anatomy and Physiology . . . . . . . . . . . 307
Normal Growth and Development . . . . . . . . . . . 307

**Niagara County Employment and Training Department**

Bookkeeping/Accounting . . . . . . . . . . . . . . . . . 400
Building Trades . . . . . . . . . . . . . . . . . . . . . . . . 400
Clerk-Typist . . . . . . . . . . . . . . . . . . . . . . . . . . 400
Diesel Mechanics—Heavy Equipment Repair . . . . . . . . . . . . . . . . . . . . . . . . . . . . 400
Electronics—Cable Technician . . . . . . . . . . . . . 401
General Secretarial . . . . . . . . . . . . . . . . . . . . . 401
Industrial Mechanic . . . . . . . . . . . . . . . . . . . . . 401
Machine Operator . . . . . . . . . . . . . . . . . . . . . . 401
Machinist . . . . . . . . . . . . . . . . . . . . . . . . . . . . 401

Major Appliance Repair ... 401
Refrigeration and Air Conditioning ... 402
Shorthand ... 402
Typing ... 402
Typing and Clerical Office Procedures ... 402
Welding ... 402

**Northport Veterans Administration Medical Center**

Clinical Practicum ... 308
Darkroom Chemistry and Procedures ... 308
Fundamentals of Radiography ... 308
Medical-Surgical Diseases ... 309
Patient Care ... 309
Pediatric Radiography ... 309
Principles of Radiographic Exposure ... 309
Radiation Protection and Radiobiology ... 309
Radiographic Anatomy and Physiology ... 310
Radiographic Film Critique ... 310
Radiographic Positioning ... 310
Radiological Physics ... 310
School of Radiologic Technology ... 308
Special Areas of Radiological Physics ... 310
Special Procedures ... 311

**Onondaga County Employment and Training Agency**

Auto Refinishing ... 404
Auto Services ... 404
Automotive Diesel/Import Auto Mechanics ... 404
Dental Assistant ... 404
Home Health Care Aide ... 404
Residential Landscaping and Grounds Maintenance ... 405
Secretarial Training ... 405
Tool and Die ... 405

**Peat, Marwick, Mitchell & Co.**

Basic Tax Concepts ... 312
Operating Tax Principles ... 312
Planning Tax Entities ... 312

**Pepsi-Cola Company, Pepsi-Cola Management Institute**

Basic Financial Concepts ... 313
Coordinating the Marketing and Production Functions of the Franchise ... 313
Distribution Management ... 313
Dynamics of Warehouse Operations ... 313
Financial Decisionmaking ... 313
Franchise Opportunities Through Market Research ... 314
Introduction to Management ... 314
Management by Objectives ... 314
Marketing Soft Drinks to the Supermarket Industry ... 314
The People Program: Individual Development ... 314
Plant Operations Management ... 314
Project Management ... 315
Promotion Profitability ... 315
Sales Forecasting ... 315

**Pilgrim Psychiatric Center**

Medication Administration Certification ... 316

**Play Schools Association, Inc.**

In-Service Training Institute in Therapeutic Recreation ... 317

**Port Authority of New York and New Jersey**

Accident Prevention, First Aid, and Safety Education ... 323
Advanced Electrical Theory ... 322
Advanced Records Management ... 318
Air Pollution and Smoke Control ... 324
Alternating Current ... 322
Applied D.C. & A.C. Theory ... 322
Automatic Controls ... 325
Automotive Apprentice Training Program ... 321
Automotive Class and Shop Work ... 321
Basic Electricity ... 325
Basic Mathematics ... 321, 322, 325
Basic Physics ... 322, 323, 325
Basic Refrigeration and Air Conditioning ... 325
Blueprint and Automotive Drawing Interpretation ... 322
Blueprint Reading and Sketching ... 323, 325
Boilers and Accessories ... 325
Case Problems in Organizational Behavior and Administration ... 318
Case Problems in Systems Analysis ... 318
Central Station Refrigeration Machines ... 325
Criminal Law and Procedure ... 323
Electrical Apprentice Training Program ... 322
Electrical Theory and Circuits ... 323
Engines ... 325
Fundamentals of Records Management ... 318
High Tension Training Program ... 319
Industrial Electronic Controls ... 323
Introduction to Law Enforcement ... 323
Leadership Communications Workshop ... 319
Management Orientation to Computers ... 319
The Managerial Grid ... 319

Managerial Psychology . . . . . . . . . . . . . . . . . . . . 319
Managerial Workshop . . . . . . . . . . . . . . . . . . . . . 319
Motivation—Key to Productivity . . . . . . . . . . . . 320
Personnel Supervision . . . . . . . . . . . . . . . . . . . . 320
Police and Community Problems . . . . . . . . . . . . 324
Police Recruit Training Program . . . . . . . . . . . . 323
Problem Analysis and Decision Making . . . . . . . 320
Psychology—Understanding Human Behavior I . . . . . . . . . . . . . . . . . . . . . . . . 320
Sergeant's Pre-Promotional Supervisory Training Course . . . . . . . . . . . . . . . . . . . . 320
Shop and Field Work . . . . . . . . . . . . . . . . . . . . 326
Social Psychology . . . . . . . . . . . . . . . . . . . . . . 324
Stenographic Skills (100 WPM) . . . . . . . . . . . . 320
Stenographic Skills (120 WPM) . . . . . . . . . . . . 320
The Supervisor's Job . . . . . . . . . . . . . . . . . . . . 321
Tools, Skills, and Principles of Management . . . . . . . . . . . . . . . . . . . . . . . 321
Traffic Law and Procedure . . . . . . . . . . . . . . . . 324
Typing Skills Training . . . . . . . . . . . . . . . . . . . 321
Watch Engineer Apprentice Training Program . . . . . . . . . . . . . . . . . . . . . . . . . 324

**Port Authority of New York and New Jersey—World Trade Institute**

Commodity Trading . . . . . . . . . . . . . . . . . . . . . 327
Customs Brokerage . . . . . . . . . . . . . . . . . . . . . 327
Evening School of World Trade . . . . . . . . . . . . 327
Export/Import Letter of Credit . . . . . . . . . . . . . 328
Export Transportation Management . . . . . . . . . 328
Import Transportation Management . . . . . . . . . 328
Importing Techniques . . . . . . . . . . . . . . . . . . . 328
Intensive Spoken Spanish . . . . . . . . . . . . . . . . 329
Language School . . . . . . . . . . . . . . . . . . . . . . 329
Marine Insurance . . . . . . . . . . . . . . . . . . . . . . 328
Maritime Law . . . . . . . . . . . . . . . . . . . . . . . . 329
Ocean Transportation Accounting . . . . . . . . . . 329
Steamship Accounting . . . . . . . . . . . . . . . . . . 329

**The Presbyterian Hospital in the City of New York**

Medical Coding (ICK-9-CM) . . . . . . . . . . . . . . . 331
Medical Terminology I . . . . . . . . . . . . . . . . . . 331
Medical Terminology II . . . . . . . . . . . . . . . . . 331

**Program Management Support Systems, Inc.**

Financial Practices for Non-Financial Personnel . . . . . . . . . . . . . . . . . . . . . . . . . 332
Management of Human Resources . . . . . . . . . . . 332

**Reading Reform Foundation**

The Writing Road to Reading . . . . . . . . . . . . . 333

**Redhook Family Day Care Training Center of New York**

Children's Literature . . . . . . . . . . . . . . . . . . . 334
The Creative Experience: Developmental Activities for Young Children in Family Day Care . . . . . . . . . . . . . . . . . . . . 334
Health, Safety, and Nutrition Issues in Family Day Care . . . . . . . . . . . . . . . . . . . . 334
Math and Concept Development . . . . . . . . . . . . 334
Science for Children in Family Day Care . . . . . . 335
Stages and Patterns of Growth and Development for Children in Family Day Care . . . . . . . . . . . . . . . . . . . . . . . . 335

**St. Luke's - Roosevelt Hospital Center**

Critical Care Nursing . . . . . . . . . . . . . . . . . . . 337
Hemodialysis . . . . . . . . . . . . . . . . . . . . . . . . . 337
Medical Coding (ICD-9-CM) . . . . . . . . . . . . . . . 336
Medical Terminology . . . . . . . . . . . . . . . . . . . 336
Motivational Dynamics . . . . . . . . . . . . . . . . . . 336
Nursing Service Department . . . . . . . . . . . . . . 336

**Saratoga County Employment and Training Administration**

World of Work . . . . . . . . . . . . . . . . . . . . . . . . 406

**Seamen's Church Institute of New York**

Basic Ocean Transportation . . . . . . . . . . . . . . . 338
Computer Concepts for the Transportation Industry . . . . . . . . . . . . . . . . . . . . . . . . . 338
Container Control and Terminal Operations . . . 338
EDP (Computer) Techniques for the Transportation Industry . . . . . . . . . . . . . . . 338
Franklin D. Roosevelt Institute of Maritime and General Studies . . . . . . . . . . 338
Intermodal Transporation and Containerization . . . . . . . . . . . . . . . . . . . . 338
Intermodal Transportation/Containerization and Pricing . . . . . . . . . . . . . . . . . . . . . . . . 339
Modern Ocean Transportation . . . . . . . . . . . . . 339
Modern U.S. Domestic Transportation . . . . . . . . 339
Pricing Techniques for Intermodal Transportation . . . . . . . . . . . . . . . . . . . . . . . 339
Pricing Techniques for the Transportation Industry . . . . . . . . . . . . . . . . . . . . . . . . . 339
Transportation Regulatory Law . . . . . . . . . . . . 339
U.S. Government Transportation Regulations . . . . . . . . . . . . . . . . . . . . . . . . 339

**South Nassau Communities Hospital**

Clinical Practicum I, II, III, and IV . . . . . . . . . . 340
Film Evaluation I, II, III, and IV . . . . . . . . . . . . 340
Introduction to Radiologic Technology . . . . . . . 341
Medical Ethics . . . . . . . . . . . . . . . . . . . . . . . . . 341
Medical Terminology . . . . . . . . . . . . . . . . . . . . 341
Methods of Patient Care . . . . . . . . . . . . . . . . . 341
Pathology . . . . . . . . . . . . . . . . . . . . . . . . . . . . 341
Positioning I, II, III . . . . . . . . . . . . . . . . . . . . . 342
Principles of Radiographic Exposure . . . . . . . . . 342
Radiation Biology . . . . . . . . . . . . . . . . . . . . . . . 342
Radiographic Anatomy and Physiology I . . . . . . 342
Radiographic Anatomy and Physiology II . . . . . 342
Radiographic Processing . . . . . . . . . . . . . . . . . 342
Radiological Physics . . . . . . . . . . . . . . . . . . . . . 343
School of Radiologic Technology . . . . . . . . . . . 340
Special Procedures . . . . . . . . . . . . . . . . . . . . . . 343

**Southern New England Telephone Company**

Basic Logic (E230) . . . . . . . . . . . . . . . . . . . . . . 344
Basic Transmission Principles (E280) . . . . . . . . . 344
Codes and Coding (E220) . . . . . . . . . . . . . . . . . 345
Computer Concepts (E250) . . . . . . . . . . . . . . . . 345
Electrical Engineering Principles . . . . . . . . . . . . 345
Electrical Engineering Principles (E260) . . . . . . 345
Engineering Economy . . . . . . . . . . . . . . . . . . . 344
Engineering Fundamentals . . . . . . . . . . . . . . . . 344
Engineering Mathematics (E200) . . . . . . . . . . . 344
Engineering Mathematics . . . . . . . . . . . . . . . . . 345
Information Principles (E240) . . . . . . . . . . . . . . 345
Mathematics (E240) . . . . . . . . . . . . . . . . . . . . . 345
Number One ESS
    (Electronic Switching Systems)
    Methods of Operation . . . . . . . . . . . . . . . . . 344
Numbering Systems (E210) . . . . . . . . . . . . . . . 345
Statistics and Probability . . . . . . . . . . . . . . . . . 345

**Sperry Division of**
**Sperry Corporation**

Advanced Control System Theory
    (T-602-1) . . . . . . . . . . . . . . . . . . . . . . . . . . 346
Architecture of General Purpose Digital
    Computers (T-810-1) . . . . . . . . . . . . . . . . . . 346
DMS 1100 Data Base Application and
    Implementation I and II (T-812-1 & 2) . . . . 346
Exec 8 Operating System I and II
    (T-806-1 & 2) . . . . . . . . . . . . . . . . . . . . . . . 346
Exec 8 Operating System I and II
    (T-806-1 & 2 Univac 1100 Operating
    System) . . . . . . . . . . . . . . . . . . . . . . . . . . . 346
Fundamentals of Digital Computers
    (I-801-1) . . . . . . . . . . . . . . . . . . . . . . . . . . . 347
Industrial Psychology (M-413-1) . . . . . . . . . . . . 347
Introduction to Kalman Filtering Theory
    (T-108-1) . . . . . . . . . . . . . . . . . . . . . . . . . . 347
Modern Control Theory and Application I and II
    (T-601-1 & 2) . . . . . . . . . . . . . . . . . . . . . . . 347
Modern Methods in Computer Programming—
    Structured Programming (T-809-1) . . . . . . . 347
Principles and Techniques of Marine Inertial
    Navigation (T-504-1) . . . . . . . . . . . . . . . . . . 347
Principles of Traffic Control (T-607-1) . . . . . . . . 348
Probability and Statistics I and II
    (T-103-1 & 2) . . . . . . . . . . . . . . . . . . . . . . . 348
Selected Topics in Transportation Systems
    Analysis (T-608-1) . . . . . . . . . . . . . . . . . . . . 348
Selection and Programming of Minicomputers
    (T-706-1) . . . . . . . . . . . . . . . . . . . . . . . . . . 348
Selection and Programming of Minicomputers
    and Microprocessors (T-706-1) . . . . . . . . . . 348
Sonar System Seminar (T-403-1) . . . . . . . . . . . . 348
Sperry Supervisory Training Program
    (M-412-1) . . . . . . . . . . . . . . . . . . . . . . . . . . 349
Supervisory Counseling and Communication
    Techniques (M-414-1) . . . . . . . . . . . . . . . . . 349
Test Design and Data Evaluation
    (T-609-1) . . . . . . . . . . . . . . . . . . . . . . . . . . 349

**Suffolk County Police Department**

Criminal Investigation . . . . . . . . . . . . . . . . . . . 350
Criminal Law and Procedure . . . . . . . . . . . . . . . 350
Patrol Procedures . . . . . . . . . . . . . . . . . . . . . . . 350
Physical Education . . . . . . . . . . . . . . . . . . . . . . 350
Police Community Relations . . . . . . . . . . . . . . . 351
Recruit Training Program . . . . . . . . . . . . . . . . . 350

**Summer Adolescent Vocational Exploration**
**Program** . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 408

**Texaco, Inc.**

Advanced Management Development . . . . . . . . 352
Human Resource Management . . . . . . . . . . . . . 352
Leadership Skills . . . . . . . . . . . . . . . . . . . . . . . 352
Management Development . . . . . . . . . . . . . . . . 352
Personnel Management . . . . . . . . . . . . . . . . . . . 352

**Union Carbide Corporation**

Executive Finance and Accounting . . . . . . . . . . 353

**United Cerebral Palsy Associations of**
**New York State, Inc.**

Anatomy and Physiology of the Speech
    Mechanism . . . . . . . . . . . . . . . . . . . . . . . . . 354
An Integrated Neurophysiological Approach
    Toward Management of an Institutionalized
    Multiple-Handicapped Population . . . . . . . . 354

Management of the Blind and Partially Sighted . . . . . . . . . . . . . . . . . . . . 354
Normal Growth and Development (Baccalaureate Level) . . . . . . . . . . . . . . . . 355
Normal Growth and Development (Graduate Level) . . . . . . . . . . . . . . . . . . . 355

**United New York and New Jersey Sandy Hook Pilot's Association**

Advanced Navigation and Nautical Science (05) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 356
Basic Nautical Science (01) . . . . . . . . . . . . . . . 356
Basic Navigation, Seamanship, and Safety (02) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 357
Intermediate Nautical Science and Rules of the Nautical Road (03) . . . . . . . . . . . . . . . 357
Pilot Training Program . . . . . . . . . . . . . . . . . . 356
Ship Operation and Management Laboratory (06L) . . . . . . . . . . . . . . . . . . . . 357
Terrestrial Navigation (04) . . . . . . . . . . . . . . . . 357

**United States Public Health Service Hospital–Staten Island, New York**

Anatomy and Physiology . . . . . . . . . . . . . . . . . 358
Anatomy, Physiology, and Pathology . . . . . . . . . 363
Anesthesia . . . . . . . . . . . . . . . . . . . . . . . . . . . 358
Applied Practice . . . . . . . . . . . . . . . . . . . . . . . 363
Cardiopulmonary Resuscitation . . . . . . . . . . . . 359
Chemistry and Physics . . . . . . . . . . . . . . . . . . 363
Clinical Chemistry/Clinical Laboratory . . . . . . . 359
Clinical Pharmacology . . . . . . . . . . . . . . . . . . . 359
Clinical Practice . . . . . . . . . . . . . . . . . . . . . . . 359
Dermatology . . . . . . . . . . . . . . . . . . . . . . . . . . 359
Dietetics . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 359
Electrocardiography . . . . . . . . . . . . . . . . . . . . 359
Fundamentals of Anesthesia . . . . . . . . . . . . . . . 363
Health History and Physical Examination . . . . . . . . . . . . . . . . . . . . . . . . . 359
Human Behavior in Family Practice . . . . . . . . . . 360
Medical-Surgical Techniques . . . . . . . . . . . . . . 360
Medicine . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 360
Microbiology . . . . . . . . . . . . . . . . . . . . . . . . . . 360
Obstetrics and Gynecology . . . . . . . . . . . . . . . 361
Ophthalmology . . . . . . . . . . . . . . . . . . . . . . . . 361
Oral Pathology . . . . . . . . . . . . . . . . . . . . . . . . 361
Orthopedics . . . . . . . . . . . . . . . . . . . . . . . . . . 361
Otolaryngology . . . . . . . . . . . . . . . . . . . . . . . . 361
Pathology . . . . . . . . . . . . . . . . . . . . . . . . . . . . 361
Pediatrics . . . . . . . . . . . . . . . . . . . . . . . . . . . . 361
Pharmacology . . . . . . . . . . . . . . . . . . . . . . . . . 363
Physician's Assistant Training Program . . . . . . . 358
Psychiatry . . . . . . . . . . . . . . . . . . . . . . . . . . . . 361
Radiology . . . . . . . . . . . . . . . . . . . . . . . . . . . . 361
Respiratory Care . . . . . . . . . . . . . . . . . . . . . . . 364
Respiratory Therapy . . . . . . . . . . . . . . . . . . . . 361
School of Anesthesia for Nurses . . . . . . . . . . . . 362
Seminar . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 364
Surgery . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 362
Surgical Procedures Laboratory . . . . . . . . . . . . 362
Surgical Specialties . . . . . . . . . . . . . . . . . . . . . 362
Urology . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 362

**Vassar Brothers Hospital**

Coronary Care Course for Nurses . . . . . . . . . . . 365

**Vermont Criminal Justice Training Council**

Basic Recruit Program . . . . . . . . . . . . . . . . . . . 366
Communication . . . . . . . . . . . . . . . . . . . . . . . . 366
Criminal Law . . . . . . . . . . . . . . . . . . . . . . . . . 366
Emergency Services . . . . . . . . . . . . . . . . . . . . 366
Fundamentals of Supervision . . . . . . . . . . . . . . 367
Inservice Courses . . . . . . . . . . . . . . . . . . . . . . 367
Investigative Procedures . . . . . . . . . . . . . . . . . 366
Motor Vehicle Law . . . . . . . . . . . . . . . . . . . . . 366
Police Patrol Tactics . . . . . . . . . . . . . . . . . . . . 367

**Washington Public Power Supply System**

Applied Fluid Mechanics . . . . . . . . . . . . . . . . . 368
Deformation and Fracture Mechanics . . . . . . . . 368
Effective Presentation Skills . . . . . . . . . . . . . . . 368
Electrical Circuit Theory and Applications . . . . 369
Materials Science . . . . . . . . . . . . . . . . . . . . . . 369
Research Reactor Training . . . . . . . . . . . . . . . . 369
Thermodynamics I: Fundamentals . . . . . . . . . . 369
Thermodynamics II: Heat Transfer . . . . . . . . . . 369
Washington Nuclear Project 2 Boiling Water Reactor Systems . . . . . . . . . . . . . . . . 370

**Westchester County Office of Employment and Training**

Auto Body Repair . . . . . . . . . . . . . . . . . . . . . . 407
Automobile Repair . . . . . . . . . . . . . . . . . . . . . 407
Electronics Occupations . . . . . . . . . . . . . . . . . 407
Health Services Occupations . . . . . . . . . . . . . . 407
Metal Machining Occupations . . . . . . . . . . . . . 408
Typing and Clerical Office Procedures . . . . . . . . 408

**Western Electric Company, Incorporated**

Bell System Training Center . . . . . . . . . . . . . . . 371
No. 1 Electronic Switching System (ESS) Training (540) . . . . . . . . . . . . . . . . 371
No. 1 ESS Central Processor Testing and Program (509B) . . . . . . . . . . . . . . . . . . . . . 372
No. 1 ESS Complex Hardware Testing (CHT-1) . . . . . . . . . . . . . . . . . . . . . . . . . 372

No. 1 ESS Programming and Circuitry (534) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 372
No. 1 ESS System Verification Testing Theory (539) . . . . . . . . . . . . . . . . . . . . . . . . 371
No. 2 ESS Peripheral Units (508C) . . . . . . . . . . . 371
No. 2B Electronic Switching System (ESS) (537B) . . . . . . . . . . . . . . . . . . . . . . . 371
No. 2B ESS Processor (509CB) . . . . . . . . . . . . . . 371
Remreed TLN and LLN (508R) . . . . . . . . . . . . . 372

**Xerox Corporation**

Advanced COBOL Programming . . . . . . . . . . . . 378
Advanced Data Communications (434) . . . . . . . 378
APL Overview (402) . . . . . . . . . . . . . . . . . . . . . 378
APL Programming (406) . . . . . . . . . . . . . . . . . . . 378
Assembly Language Coding . . . . . . . . . . . . . . . . 378
Basic Data Communications (430) . . . . . . . . . . . 378
Basic Electricity (E120) . . . . . . . . . . . . . . . . . . . 373
Basic Transistor Circuits (E140) . . . . . . . . . . . . . 373
Boolean Algebra (C200) . . . . . . . . . . . . . . . . . . . 373
Business Systems Group . . . . . . . . . . . . . . . . . . . 373
COBOL Modular Programming—S/360 (126) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 378
COBOL Optimization (118) . . . . . . . . . . . . . . . . 378
COBOL Programming . . . . . . . . . . . . . . . . . . . . . 378
Control Blocks (150) . . . . . . . . . . . . . . . . . . . . . . 379
Core Dump Analysis (154) . . . . . . . . . . . . . . . . . 379
Data Processing Project Management (518) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 379
Decision Tables (542) . . . . . . . . . . . . . . . . . . . . . 379
Face-to-Face Communication I (P140) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 374
Face-to-Face Communication II (P150) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 374
Field Executive Development Program (FEDP) . . . . . . . . . . . . . . . . . . . . . 375
Fundamental Computer Concepts (502) . . . . . . . 379
Fundamentals of Digital Computers I (C210) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 374
Fundamentals of FORTRAN (158) . . . . . . . . . . . 379
General Services Division . . . . . . . . . . . . . . . . . 378
Headquarters New Manager Workshop . . . . . . . 376
Human Relations (P130) . . . . . . . . . . . . . . . . . . . 374
IBM OS Programming . . . . . . . . . . . . . . . . . . . . 379
Intermediate Assembler (206) . . . . . . . . . . . . . . 379
Intermediate COBOL (110) . . . . . . . . . . . . . . . . 379
Introduction to A Programming Language (APL) . . . . . . . . . . . . . . . . . . . . . . 379
Introduction to Assembler (202) . . . . . . . . . . . . . 379
Introduction to COBOL (106) . . . . . . . . . . . . . . 379
Introduction to Computer Science . . . . . . . . . . . 379
Introduction to Data Communications . . . . . . . . 380
Introduction to Logic Design Symbols (C110) . . . . . . . . . . . . . . . . . . . . . . 375
Introduction to Program Logic (102) . . . . . . . . . 380
Introduction to Transistors (E130) . . . . . . . . . . . 375
JCL—I (142) . . . . . . . . . . . . . . . . . . . . . . . . . . . . 380
JCL—II (146) . . . . . . . . . . . . . . . . . . . . . . . . . . . 380
Logistics and Distribution Manager Workshop . . . . . . . . . . . . . . . . . . . . . . . . . . 376
Management Action Workshop . . . . . . . . . . . . . 376
Management Studies . . . . . . . . . . . . . . . . . . . . . 376
Microcomputer I (C230) . . . . . . . . . . . . . . . . . . . 375
Microcomputer II (C240) . . . . . . . . . . . . . . . . . . 375
National Service/Distribution—Continuing Education Program . . . . . . . . . . . 373
New Administrative Manager Workshop . . . . . . 376
New Control Manager Workshop . . . . . . . . . . . . 376
New Manager Workshops . . . . . . . . . . . . . . . . . . 376
New Sales Manager Workshop, Phases I and II . . . . . . . . . . . . . . . . . . . . . . . 377
New Service Manager Workshop, Phases I and II . . . . . . . . . . . . . . . . . . . . . . . 377
OS Internals—S/360 (214) . . . . . . . . . . . . . . . . . 380
Personnel Administration (P120) . . . . . . . . . . . . 375
Personnel Education and Development Center . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 378
Personnel Management Training . . . . . . . . . . . . 375
Pre-Sales Manager Workshop . . . . . . . . . . . . . . . 377
Principles of Management (P110) . . . . . . . . . . . . 375
Region Administrative Workshop . . . . . . . . . . . . 377
Staff Effectiveness Workshop . . . . . . . . . . . . . . . 377
Strategies for Effective Listening (P110) . . . . . . . 375
Structured Programming—COBOL (130) . . . . . . 380
Systems Analysis and Design (510) . . . . . . . . . . . 380
Technical Electricity and Electronics (E200) . . . 375
Techniques of File Organization (256) . . . . . . . . 380
Understanding Solid State Electronics (E110) . . 375
Using the Metric System (P170) . . . . . . . . . . . . . 375

**YWCA of the City of New York**

Gregg Refresher . . . . . . . . . . . . . . . . . . . . . . . . . 381
Pitman Refresher . . . . . . . . . . . . . . . . . . . . . . . . 381
Principles of Accounting: Part I . . . . . . . . . . . . . 381
Principles of Accounting: Part II . . . . . . . . . . . . 381

## ORDER FORM

## A GUIDE TO EDUCATIONAL PROGRAMS IN NONCOLLEGIATE ORGANIZATIONS
## 1982 EDITION

Number of copies of *A Guide to Educational Programs in Noncollegiate Organizations* @$25.00, postage and handling included . . . . . . . . . . . . . ____________

Total remittance enclosed . . . . . . . ____________

Name and Address:

____________________________
____________________________
____________________________
____________________________
____________________________

Make checks payable to THE REGENTS RESEARCH FUND. Bulk rates are available for orders of 10 copies or more. Payment must accompany all orders.

Mail to: Program on Noncollegiate Sponsored Instruction, Room 5A11, Cultural Education Center, Empire State Plaza, Albany, New York 12230.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ORDER FORM

A GUIDE TO EDUCATIONAL PROGRAMS IN NONCOLLEGIATE ORGANIZATIONS
1982 EDITION

Number of copies of *A Guide to Educational Programs in Noncollegiate Organizations* @$25.00, postage and handling included . . . . . . . . . . . . . ____________

Total remittance enclosed . . . . . . . ____________

Name and Address:

____________________________
____________________________
____________________________
____________________________
____________________________

Make checks payable to THE REGENTS RESEARCH FUND. Bulk rates are available for orders of 10 copies or more. Payment must accompany all orders.

Mail to: Program on Noncollegiate Sponsored Instruction, Room 5A11, Cultural Education Center, Empire State Plaza, Albany, New York 12230.